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/20000	SYSTEM
/11000	ARRAY
	SPACE
	FREE
	CODIFIED
	BASIC
	SYMBOL
	TABLE
	LINEBUF
	STACK
	FORLIST
	GOLIST
/17756	RIM
/17777	LOADER

/4200	*
/4201	-
/4302	*
/4303	/
/4404	*
/4105	*
/4106	*
/4107	*
/4112	*

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/4110	<<
/4111	>>
/4111	>>
/4112	<<
/4213	(UMINUS)
/4214	(DONE)
/4215	,
/4216	,
/4217	,
/4221	TO
/4222	STEP
/4223	(
/4224	FN
/4225	COS
/4226	TAN
/4227	ATN
/4230	LOG
/4231	EXP
/4232	SQR
/4233	ABS
/4234	SGN
/4235	INT
/4236	RND
/4237	SIN
/6002	(CRLF)
/6003	\
/6001	END
/6002	FOR
/6003	GOSUB
/6004	GOTO
/6004	THEN
/6005	IF
/6006	INPUT
/6007	LET
/6010	NEXT
/6011	PRINT
/6012	RETURN
/6013	STOP
/6014	DIM
/6015	RESTORE
/6017	DEF
/6220	READ
/6221	DATA
/6222	(EXIT)
/6223	(EOF)

0200	FEXIT=2000
0240	FSNE=0240
0250	FSEQ=0250
0100	FSCE=0100
0110	FSLT=0110
0140	FSOT=0140
0150	FSLE=0150


```
221 1000 FJMP=1000
222 1400 FJMPI=1400
223 2000 FST=2000
224 2400 FSTI=2400
225 3000 FLD=3000
226 3400 FLDI=3400
227 4000 FAD=4000
228 4400 FADI=4400
229 5000 FSA=5000
230 5400 FSBI=5400
231 6000 FMP=6000
232 6400 FMPI=6400
233 7000 FDV=7000
234 7400 FDI=7400
235 8000 FAD=8000
236 8600 BKWD=8600
237
238
239
240
241 6530 ADCL=6530
242 6531 ADLM=6531
243 6532 ADST=6532
244 6533 ADRB=6533
245 6534 ADSK=6534
246 6535 ADSE=6535
247 6536 ADLE=6536
248 6537 ADRS=6537
249 6050 DILC=6050
250 6051 DICO=6051
251 6052 DISD=6052
252 6053 DILX=6053
253 6054 DILY=6054
254 6055 DIXY=6055
255 6056 DILE=6056
256 6057 DIRE=6057
257 6134 CLEN=6134
258 6135 CLAS=6135
259 6132 CLOS=6132
260 6130 CLZE=6130
261 6131 CLSK=6131
262 6137 CLCA=6137
263 6135 CLSA=6135
264 6136 CLBA=6136
265
266
267
268
269
270
271
272
273
274
275 0000 *0
```

```
276
277 00000 0000 0 /INTERUPT ROUTINES.
278 00001 5002 JMP I ,+1 /UP, UP AND AWAY.
279 00002 6000 INTER
280
281 00003 0000 ARRLOC, 0
282 00004 0000 CODELOC, 0
283 00005 0000 PSYMTAB, 0
284 00006 0000 NSYMTAB, 0
285 00007 0215 0215, 215
286 00010 0212 0212, 212
287 00011 0260 0260, 260
288 00012 0000 OV, 0
289 00013 0000 INDEX1, 0
290 00014 0000 INDEX2, 0
291 00015 0000 DISAUTO, 0
292 00016 0000 AC3, 0
293 00017 0000 AC2, 0
294 00020 0000 AC1, 0
295 00021 0000 OP3, 0
296 00022 0000 OP2, 0
297 00023 0000 OP1, 0
298 00024 0000 ACS, 0
299 00025 0000 ACE, 0
300 00026 0000 OPS, 0
301 00027 0177 0177, 177
302 00030 0000 OPE, 0
303 00031 0000 TMP, 0
304 00032 7201 PGETCH, GETCH
305 00033 0741 PPATCH, PATCH
306 00034 0000 DIMFLAG, 0
307 4435 FENTER=JMS I ,JFPT
308 00035 4200
309 00036 0000 PDL, 0
310 00037 7512 PLINBUF, LINBUF
311 00040 0266 MLINBUF, -LINBUF
312 00041 0135 MENOLIN, -ENDLIN
313 00042 0000 PRTEMP, 0
314 00043 0000 DECEXP, 0
315 00044 5335 PNUMBUF, NUMBUF
316 00045 0000 LOCCTR, 0
317 00046 0000 READLOC, 0
318 00047 7363 PARGERR, ARGERR
319 00050 0000 WORD, 0
320 00051 0240 0240, 240
321 00052 0000 LINEND, 0
322 00053 0000 GOTEMP, 0
323 00054 7740 07740, 7740
324 00055 7770 07770, 7770
325 00056 0000 EPTR, 0
326 00057 0000 FPTR, 0
327 00060 0000 GPTR, 0
328 00061 0000 WPTH, 0
329 00062 0002 02, 2
330 00063 0000 FORCT, 0
```




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331 00064 0000 SNUMFLG,0
332 00065 0012 012, 12
333 00066 0000 0LOOP, 0
334 00067 0000 ADDRESS,0
335 00070 0077 077, 77
336 00071 0377 0377, 377
337 00072 0007 07, 7
338 00073 0000 OPERAND,01010
339 00074 0000
340 00075 0000
341 00076 7501 PTEXT, XYTEXT
342 00077 4142 PEROPR, PRORR
343 00078 5441 PREERR, SYERR
344 00079 1000 PEVAL, EVAL
345 00082 1400 PGETADR,GETADR
346 00083 0213 PEEXECUT,EXECUTE
347 00084 2364 PPUSH, PUSH
348 00085 3551 PRSP, PCP
349 00086 0744 PFI, FIX
350 00087 1202 PGCTOPR,GETOPR
351 00088 2472 PPASSCR,PASSCR
352 00089 1015 PGCTOPR,GETOPR
353 00090 0341 PSTOVAR,STOVAR
354 00091 0311 PGETVAR,GETVAR
355 00092 3702 PPRINTX,PRINTX
356 00093 1674 PGETBLK,GETBLK
357 00094 2707 PSLOOP, SLOOP
358 00095 5000 POUTNUM,OUTNUM
359 00096 2405 PEDIT, EDIT
360 00097 6430 PSTICKI,STICKI
361 00098 3110 PNONRLN,NONRLN
362 00099 3747 PPRINUM,PRINUM
363 00100 2603 PGETLIN,GETLIN
364 00101 7644 PPOLIST,POLIST
365 00102 0000 COLUMN, 0
366 00103 0000 INDEV, 0
367 00104 0000 OUTD2, 0
368 00105 0000 OUTDEV, 0
369 00106 0000 CODEV, 0
370 00107 0000 CNTLO, 0
371 00108 0000 NOINT, 0
372 00109 0000 RBSWCH, 0
373 00110 0000 DISB, 0
374 00111 7116 PRESET, RESET1
375 00112 7065 SPECINT,CCINTK
376 00113 7326 PCOWT, COWT
377 00114 7146 DELOUT, OUTDEL
378 00115 0360 CNCLR, CLRCNT
379 00116 6413 SPLEFT, RMLEFT
380 00117 0000 PTEN, TEN
381 00118 4600 PANORM, ANORM
382 00119 4402 PAR1, AR1
383 00120 0654 PAL1, AL1
384 00121 2014 ONE, 2014
385 00122 0000 ZERC, 01010
```

/THIS PREVENTS INTERRUPTS DURING CRITICAL TIMES.

```
386 00153 0000
387 00154 0000
388 00155 0000 0200, 200
389 00156 0000 FPFLAG, 0
390 00157 4435 POADD, OADD
391 00158 0004 04, 4
392 00159 2330 PLINFIX,LINFIX
393 00160 7745 07745, 7745
394 00161 6400 PCHKFIT,CHKFIT
395 00162 7725 PGOLIST,GOLIST
396 00163 0000 GSBPTR, 0
397 00164 0001 GET=1
398 00165 4566 ISIT=JMS I ,IXISIT;XGISIT
399 00166 4073
400 00167 4066
401 00168 4570 MUSTBE=JMS I ,IXMUST;XMUST
402 00169 7352
403 00170 7345
404 00171 7563 PLBEGIN,LBEGIN
405 00172 0214 MLBEGIN,-LBEGIN-1
406 00173 0074 MLEND, -ENDPDL
407 00174 4104 PISITLT,ISITLT
408
409
410
411
412
413
414
415 00200 PAGE
416
417 0177 *-1
418
419
420 00177 0000 GETWO, 0
421 00200 1445 TAD I LOCCTR
422 00201 3050 DCA WORD
423 00202 2245 ISZ LOCCTR
424 00203 5577 JMP I GETWO
425 00204 0205 PLETOO, LETOO
426 00205 4570 LETOO, MUSTBE
427 00206 3673
428 00207 4501 JMS I PEVAL
429 00208 4570 MUSTBE
430 00209 2000
431 00210 4341 JMS
432 00211 4177 EXECUTE,JMS
433 00212 1274 TAD GETWO
434 00213 3311 DCA PLETOO
435 00214 1450 TAD I GETVAR
436 00215 7510 SPA WORD
437 00216 5231 JMP KEYWO
438 00217 7640 SZA CLA /IS IT A LINEND
439 00218 5313 JMP NOTKWD /NO
440 00219 1250 TAD WORD
```


441	00220	3252	DCA	LINENO
442	00225	4177	JMS	GETWD
443	00226	1450	TAD I	WORD
444	00227	7700	SMA CLA	
445	00230	5313	JMP	NOTKWD
446	00231	7332	CLA CLL	CML RTH
447	00232	1450	TAD I	WORD
448	00233	7400	SNL	/IS IT A STATEMENT WORD
449	00234	5500	JMP I	PSXERR /NO
450	00235	1240	TAD	SJUMP
451	00236	3237	DCA	.*+1
452	00237	7402	HLT	
453	00237	5601	SJUMP,	JMP I .+1
454	00241	0213	EXECUTE	
455	00242	2567	END	
456	00243	0413	FOR	
457	00244	0505	GOSUB	
458	00245	0517	GOTO	
459	00246	0375	IF	
460	00247	4207	INPUT	
461	00250	0312	LEY	

462	00251	0600	NEXT	
463	00252	2173	PRINT	
464	00253	0677	RETURN	
465	00254	2570	STOP	
466	00255	6472	DIM	
467	00256	3773	RESTORE	
468	00257	0467	SKIPIT	
469	00260	1576	DEF	
470	00261	1623	READ	
471	00262	0467	SKIPIT	
472	00263	2402	EXIT	
473	00264	2570	STOP	
474	00265	7173	TTYIN	
475	00266	7165	TTYOUT	
476	00267	7163	LPTOUT	
477	00270	7164	PTROUT	
478	00271	7172	PTRIN	
479	00272	6441	SXERR	/THIS SLOT IS NOW FREE. (6031)
480	00273	5573	RUBO	
481	00274	5574	NORUBO	
482			IFNZRO	MACHINE<
483				
484			CLEAR	
485			DELAY	
486			USE	
487			PLOT	
488			REALTIME	
489			SETRATE	
490			SETCLOCK	
491			WAITC	
492			WAIT	
493			SXERR	/"UCOM" --- USER COMMAND.
494			ACCEPT	
495			REJECT>	
496				
497				
498				
499			IFZERO	MACHINE<
500				
501	00275	6441	SXERR	
502	00276	6441	SXERR	
503	00277	6441	SXERR	
504	00300	6441	SXERR	
505	00301	6441	SXERR	
506	00302	6441	SXERR	
507	00303	6441	SXERR	
508	00304	6441	SXERR	
509	00305	6441	SXERR	
510	00306	6441	SXERR	
511	00307	6441	SXERR	
512	00310	6441	SXERR	
513				
514				
515				
516				


```

517 00311 2000 GETVAR, 0
518 00312 4177 LEY, JMS GETWO
519 00313 4570 NOTKWD, MUSTBE /A VARIABLE
520 00314 7000 7000
521 00315 1050 TAD WORD
522 00316 3753 DCA VAR
523 00317 3740 DCA SSONE
524 00318 3345 DCA SSTWO
525 00319 4567 GET+ISIT /"
526 00320 3755 3755
527 00321 5711 JMP I GETVAR /NO
528 00322 4501 JMS I PEVAL
529 00323 4506 JMS I PREFIX
530 00324 3744 DCA SSONE
531 00325 4566 ISIT /"
532 00326 3753 3753
533 00327 5335 JMP NOCOMMA /NO
534 00328 4501 JMS I PEVAL
535 00329 4506 JMS I PREFIX
536 00330 3745 DCA SSTWO
537 00331 4570 NOCOMMA, MUSTBE /"
538 00332 3761 3761
539 00333 4177 JMS GETWO
540 00334 5711 JMP I GETVAR
541 00335 0000 STOVAR, 0
542 00336 4502 JMS I PGETADDR
543 00337 0000 VAR, 0
544 00338 0000 SSONE, 0
545 00339 0000 SSTWO, 0
546 00340 4035 FENTER
547 00341 2467 FSTI ADDRESS
548 00342 0000 FEYIT
549 00343 5741 JMP I STOVAR
550 00344 4477 FNERR, JMS I PERROR
551 00345 0625 TEXT 'FUNCTION'
552 00346 1603
553 00347 2411
554 00348 1716
555 00349 0000 CLRONT, 0
556 00350 0000 CLA IAC /ROUTINE WHICH CHECKS STATUS OF CONTROL C FLAG.
557 00351 7221 TAD NOINT /WAS IT SET TO -1?
558 00352 1134 SNA CLA
559 00353 7650 JMP I PBOMB /YEP, GIVE STOP MESSAGE.
560 00354 5767 DCA NOINT /NOPE, RESET IT.
561 00355 3134 JMP I CLRONT /AND EXIT
562 00356 5760
563
564 00357 6670 PBOMB, CNTLCR
565
566
567
568
569
570 00370 4477 SPACERR, JMS I PERROR
571 00371 2417 TEXT 'TOO-BIG'

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572 00372 1755
573 00373 0211
574 00374 0700
575
576
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590
591 00375 4501 IF, JMS I PEVAL
592 00376 4435 FENTER
593 00377 2073 FST OPERAND
594 00400 0000 FEYIT
595 00401 4570 MUSTBE /"THEN"
596 00402 1774 1774
597 00403 1273 TAD OPERAND
598 00404 7750 SPA SNA CLA
599 00405 5267 JMP SKIPIT
600 00406 4567 GET+ISIT /A LINENO
601 00407 0000 0000
602 00410 5612 JMP I XEXECU
603 00411 5320 JMP GOTO+1
604 00412 0214 XEXECU, EXECUTE+1
605 00413 4571 FOR, GET+MUSTBE /A VARIABLE
606 00414 7000 7000
607 00415 4357 JMS FINDIT
608 00416 5235 JMP NOTHERE
609 00417 7201 CLA IAC
610 00420 1013 TAD INDEX1
611 00421 3014 DCA INDEX2
612 00422 7240 CLA CMA
613 00423 1013 TAD INDEX1
614 00424 3013 DCA INDEX1
615 00425 5232 JMP INLUFF
616 00426 1414 LUFF, TAD I INDEX2
617 00427 3413 DCA I INDEX1
618 00430 1414 TAD I INDEX2
619 00431 3413 DCA I INDEX1
620 00432 2253 INLUFF, ISZ GOTEMP
621 00433 5220 JMP LUFF
622 00434 2063 ISZ FORCT
623 00435 1263 NOTHERE, TAD FORCT
624 00436 1304 TAD 011
625 00437 7750 SPA SNA CLA
626 00440 5301 JMP FORERR /CAN'T FIT 9 IN FORLIST

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627 00441 1050 TAD WORD
628 00442 7041 CIA
629 00443 3413 DCA I INDEX1
630 00444 1050 TAD WORD
631 00445 3252 DCA FORVAR
632 00446 4571 GET+MUSTBE // "
633 00447 3673 3673
634 00450 4501 JMS I REVAL
635 00451 4502 JMS I PGETACDR
636 00452 0000 FORVAR, 0
637 00453 2000 0
638 00454 2000 0
639 00455 4435 FENTER
640 00456 2007 FSTI ADDRESS
641 00457 0000 FEXIT
642 00460 4570 MUSTBE // "TO"
643 00461 3757 3757
644 00462 1045 TAD LOCCTR
645 00463 3413 DCA I INDEX1
646 00464 7240 CLA CMA
647 00465 1263 TAD FORCT
648 00466 3063 DCA FORCT
649
650
651
652
653
654 00467 4671 SKIPIT, JMS I PIGNORE
655 00470 5503 JMP I PEXECUTE /LOOK FOR "\" OR C.R.
656 /AND EXECUTE THE NEXT STATEMENT.
657
658
659 00471 2115 PIGNORE, IGNORE
660
661
662
663
664
665
666 00472 0000 PASSCR, 0
667 00473 4671 JMS I PIGNORE /THIS LOOKS FOR A REAL C.R.
668 00474 2050 ISZ WORD /LOOK FOR "\" OR C.R.
669 00475 4566 ISIT
670 00476 4100 4100
671 00477 5273 JMP /A REAL C.R. ?
672 00500 5672 JMP I PASSCR /NOPE, A SLASH.
673 /AND RETURN TO CALLER.
674
675
676
677
678
679
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681

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682
683 00501 4477 FORERR, JMS I PERROR
684 00502 0617 TEXT "FOR"
685 00503 2200
686 00504 0011 11
687 00505 4177 GOSUB, JMS GETWO
688 00506 4332 JMS G0BOTH
689 00507 1165 TAD GSBPTR
690 00510 1325 TAD MGSBEND
691 00511 7650 SNA CLA
692 00512 5320 JMP DEEPERR
693 00513 1045 TAD LOCCTR
694 00514 3565 DCA I GSBPTR
695 00515 2165 ISZ GSBPTR
696 00516 5321 JMP GOTO+2
697 00517 4177 GOTO, JMS GETWO
698 00520 4332 JMS G0BOTH
699 00521 2053 ISZ GOTEMP
700 00522 1453 TAD I GOTEMP
701 00523 3245 DCA LOCCTR
702 00524 5503 JMP I PEXECUTE
703 00525 0023 MGSBEND, -GSBEND
704 00526 4477 DEEPERR, JMS I PERROR
705 00527 0717 TEXT "GOSUB"
706 00530 2325
707 00531 0200
708 00532 0000 G0BOTH, 0
709 00533 4570 MUSTBE /A LINENO
710 00534 0000 0000
711 00535 1050 TAD WORD
712 00536 3053 DCA GOTEMP
713 00537 2050 ISZ WORD
714 00540 4566 ISIT /DEFINED
715 00541 0000 0000
716 00542 5350 JMP ISITOF
717 00543 4477 JMS I PERROR
718 00544 1411 TEXT "LINENO"
719 00545 1605
720 00546 1617
721 00547 0000
722 00550 4571 ISITOF, GET+MUSTBE / (CR) OR "\"
723 00551 2000 2000
724 00552 5732 JMP I G0BOTH
725 00553 0000 VARTEMP, 01010
726 00554 0000
727 00555 0000
728 00556 7704 PXFORLI, FORLIST-1
729 00557 0000 FINDIT, 0
730 00560 1063 TAD FORCT
731 00561 3053 DCA GOTEMP
732 00562 1356 TAD PXFORLIST
733 00563 3013 DCA INDEX1
734 00564 5372 JMP INLOOP
735 00565 1413 FINDLUP, TAD I INDEX1
736 00566 1250 TAD WORD

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```
737 00567 7650 SNA CLA
738 00570 5375 JMP FOUND
739 00571 2013 ISZ INDEXT
740 00572 2053 INLOOP, ISZ GOTEMP
741 00573 5365 JMP FINDLUP
742 00574 5757 JMP I FINDIT
743 00575 2357 FOUND, ISZ FINDIT
744 00576 5757 JMP I FINDIT
745
746 0600 PAGE
747
748 00587 4571 NEXT, GET+MUSTBE /A VARIABLE
749 00588 7000 7000
750 00589 4672 JMS I PFINDIT
751 00590 5273 JMP NEXTERR
752 00591 1050 YAD WORD
753 00592 3237 DCA NEXTVAR
754 00593 4571 GET+MUSTBE / (CR) OR '\
755 00594 2000 2000
756 00595 1045 TAO LOCCTR
757 00596 3271 DCA LOCTEMP
758 00597 1413 TAO I INDEXT
759 00598 3045 DCA LOCCTR
760 00599 4501 JMS I PEVAL
761 00600 4435 FENTER
762 00601 2373 FST+FWD+FORLIM=,
763 00602 0300 FEEXIT
764 00603 4566 ISIT / (CR) OR '\
765 00604 2000 2000
766 00605 5226 JMP TRYSTP /NO
767 00606 4435 FENTER
768 00607 3151 FLD ONE
769 00608 1207 FJMP+FWD+GOTSTEP=,
770 00609 4570 TRYSTP, MUSTBE /STEP
771 00610 3756 3756
772 00611 4501 JMS I PEVAL
773 00612 4570 MUSTBE / (CR) OR '\
774 00613 2000 2000
775 00614 4435 FENTER
776 00615 2270 GOTSTEP, FST+FWD+FORSTEP=,
777 00616 0200 FEEXIT
778 00617 4502 JMS I PGETADDR
779 00618 0200 NEXTVAR, 0
780 00619 0200 0
781 00620 0200 0
782 00621 4435 FENTER
783 00622 3467 FLDI ADDRESS
784 00623 4260 FAD+FWD+FORSTEP=,
785 00624 2672 FST+BKWD=, -VARTEMP
786 00625 5253 FSB+FWD+FORLIM=,
787 00626 0200 FEEXIT
788 00627 1024 YAD ACS
789 00628 1324 TAO FORSTEP
790 00629 7700 SNA CLA
791 00630 1020 TAO ACI
```

```
792 00654 7640 SZA CLA
793 00655 5263 JMP FORDONE
794 00656 4435 FENTER
795 00657 3704 FLD+BKWD=, -VARTEMP
796 00658 2467 FSTI ADDRESS
797 00659 0200 FEEXIT
798 00660 5503 JMP I PEXECUTE
799 00661 1271 FORDONE, TAO LOCTEMP
800 00662 3045 DCA LOCCTR
801 00663 2063 ISZ FORCT
802 00664 2053 ISZ GOTEMP
803 00665 5265 JMP -2
804 00666 5503 JMP I PEXECUTE
805 00667 0200 LOCTEMP, 0
806 00668 0557 PFINDIT, FINDIT
807 00669 4477 NEXTERR, JMS I PERROR
808 00670 1605 TEXT 'NEXT'
809 00671 3024
810 00672 0200
811 00673 4571 RETURN, GET+MUSTBE / (CR) OR '\
812 00674 2000 2000
813 00675 1165 YAD GSBPTR
814 00676 1320 TAO MGOLIST
815 00677 7650 SNA CLA
816 00678 5313 JMP RETNERR
817 00679 7240 CLA CMA
818 00680 1165 TAO GSBPTR
819 00681 3165 DCA GSBPTR
820 00682 1565 TAO I GSBPTR
821 00683 3045 DCA LOCCTR
822 00684 5503 JMP I PEXECUTE
823 00685 4477 RETNERR, JMS I PERROR
824 00686 2205 TEXT 'RETURN'
825 00687 2425
826 00688 2216
827 00689 2000
828 00690 2053 MGOLIST, -GOLIST
829 00691 2000 FORLIM, 01010
830 00692 0200
831 00693 3000
832 00694 2200 FORSTEP, 010
833 00695 2000
834 00696 2000 SGN, 0
835 00697 4435 FENTER
836 00698 0100 FSSE
837 00699 3225 FLD+FWD+MNSONE=,
838 00700 0150 FSLE
839 00701 3151 FLD ONE
840 00702 2000 FEEXIT
841 00703 5726 JMP I SGN
842 00704 6014 MNSONE, 60141010
843 00705 0200
844 00706 0200
845 00707 0200 PUTCH, 0
846 00708 3326 DCA SGN
```



```

847 00743 1326 TAD SGN
848 00744 0027 PCCUNT, AND 0177
849 00745 1374 TAD 07763A
850 00746 7640 SZA CLA
851 00747 5357 JMP PNOCP
852 00750 1344 TAD PCCUNT
853 00751 1126 DCA COLUMN
854 00752 3237 DCA NEXTVAR
855 00753 3126 DCA COLUMN

```

```

/IS IT A C.R.
/NOPE.
/ADD IN EXTRA PLACES FOR GOOD LUCK.
/SAVE COLUMN POSITION

```

```

856 00754 1237 TAD NEXTVAR
857 00755 0376 AND PUTXRA
858 00756 7110 CLL RAR
859 00757 7170 PNOCP, CLL CML CMA 940
860 00760 3237 DCA NEXTVAR
861 00761 1326 TAD SGN
862 00762 0375 AND 0140A
863 00763 7440 SZA
864 00764 1365 TAD 07640A
865 00765 7642 07640A, SZA CLA
866 00766 2126 ISZ COLUMN
867 00767 1326 TAD SGN
868 00770 4777 JMS I JPUTCH
869 00771 2237 ISZ NEXTVAR
870 00772 5370 JMP .-2
871 00773 5741 JMP I PUTCH

```

```

/PEGET WHERE WE WERE.
/ARE WE INSERTING NULL CHARACTERS?
/NOW DIVIDE BY 2.
/AND NOW INVERT AND DIVIDE BY 2 AGAIN.
/SAVE FOR LATER USE. THIS IS NULL COUNTER.
/RECALL THE CHARACTER.

```

```

/INCREMENT THE COUNTER
/GIVE NULLS UNTIL IT'S SATISFIED.

```

```

874 00774 7763 07763A, 7763
875 00775 0140 0140A, 140
876 00776 0000 PUTXRA, 0
877 00777 7000 JPUTCH, PUTER

```

```

/NULL AFTER C.R. WORD.

```

```

885 1020 PAGE

```

```

888 01000 4403 START, JMS I XRESTA
889 01001 5602 JMP I .+1
890 01002 2440 SCRATCH
891 01003 7407 XRESTA, ISET
892
893 01004 0000 EVAL, 0
894 01005 4177 JMS GETWO
895 01006 1204 TAD EVAL
896 01007 4504 EVALGO, JMS I PPUSH
897 01010 1363 TAD 04014
898 01011 4504 JMS I PPUSH
899 01012 5216 JMP GETOPR+1
900 01013 1364 ISUMIN, TAD 04213
901 01014 4504 JMS I PPUSH
902 01015 4177 GETOPR, JMS GETWO
903 01016 4566 ISIT
904 01017 3577 3577
905 01020 7410 SKP
906 01021 5213 JMP ISUMIN
907 01022 4566 ISIT
908 01023 3600 3600
909 01024 7410 SKP
910 01025 5215 JMP GETOPR

```

```

/REST FLAGS AND DEVICES.

```

```

/..

```

```

/..

```




```

911 01026 4546      ISIT          /"(
912 01027 3755      3755
913 01030 5235      JMP          NOPAREN /NO
914 01031 4284      JMS          EVAL
915 01032 4570      MUSTBE        /)"
916 01033 3761      3761
917 01034 5527      JMP I        PGOTOPR
918 01035 4546      NOPAREN,ISIT  /A VARIABLE
919 01036 7000      7000
920 01037 5125      JMP          NOTVAR /NO
921 01040 3276      OCA          ONESS
922 01041 3277      OCA          TAOSS
923 01042 1350      TAO          WOTEMP
924 01043 3275      OCA          WOTEMP
925 01044 4547      GET+ISIT      /"(
926 01045 3755      3755
927 01046 5274      JMP          GOTSS /NO
928 01047 1275      TAO          WOTEMP
929 01050 4524      JMS I        PPUSH
930 01051 4204      JMS          EVAL
931 01052 4569      ISIT          /",
932 01053 3763      3763
933 01054 5264      JMP          ONEDIM
934 01055 4626      JMS I        PFI
935 01056 4504      JMS I        PPUSH
936 01057 4204      JMS          EVAL
937 01060 4526      JMS I        PFI
938 01061 3277      OCA          TAOSS
939 01062 4505      JMS I        PPOP
940 01063 5266      JMP          ,+3
941 01064 3277      ONEDIM, OCA   TAOSS
942 01065 4505      JMS I        PFI
943 01066 3276      OCA          ONESS
944 01067 4570      MUSTBE        /)"
945 01070 3761      3761
946 01071 4505      JMS I        PPOP
947 01072 3275      OCA          WOTEMP
948 01073 4177      JMS          GETWD
949 01074 4502      GOTSS, JMS I  PGETADDR
950 01075 2000      WOTEMP, 0
951 01076 2000      ONESS, 0
952 01077 2000      TAOSS, 0
953 01100 4435      FENTER
954 01101 3467      FLOI        ADDRESS
955 01102 0000      FEXIT
956 01103 5724      JMP I        ,+1
957 01124 1203      OPDONE
958 01105 4575      NOTVAR, JMS I  PISITLIT /ISIT A LITERAL
959 01106 5310      JMP          ISITFUN /NO
960 01107 5527      JMP I        PGOTOPR /IT IS IN THE AC NOW
961 01110 1450      ISITFUN, TAO I  WORD
962 01111 1362      TAO          03754
963 01112 7510      SPA
964 01113 5502      JMP I        PSXERR
965 01114 7450      SNA

```

/-4024, WHICH IS BEGINNING OF FUNCTIONS.
 /IS IT A LEGAL FUNCTION?
 /NO. EXIT WITH MESSAGE.
 /WAS IT "FN"

```

966 01115 4177      JMS          GETWD
967 01116 4504      JMS I        PPUSH
968 01117 4571      GET+MUSTBE
969 01120 3755      3755
970 01121 4204      JMS          EVAL
971 01122 4535      JMS I        PPOP
972 01123 1332      TAO          FJUMP
973 01124 3325      OCA          ,+1
974 01125 7402      MLT
975 01126 5727      JMP I        ,+1
976 01127 1200      FNEXTIT
977 01130 4731      FJUMP, JMS I  FUNTAB
978 01131 5453      FUNTAB, FN
979 01132 5616      CCS
980 01133 5600      TAN
981 01134 6200      ATN
982 01135 6114      LOG
983 01136 6200      EXP
984 01137 5412      SGR
985 01140 6425      ABS
986 01141 2726      SGN
987 01142 6434      INT
988 01143 5353      RND
989 01144 5624      SIN
990 01145 1761      PUTJ
991 01146 6441      SXERR
992 01147 6441      SXERR
993 01150 6441      SXERR
994
995 01151 1772      GETJ
996
997
998
999
1000
1001
1002
1003
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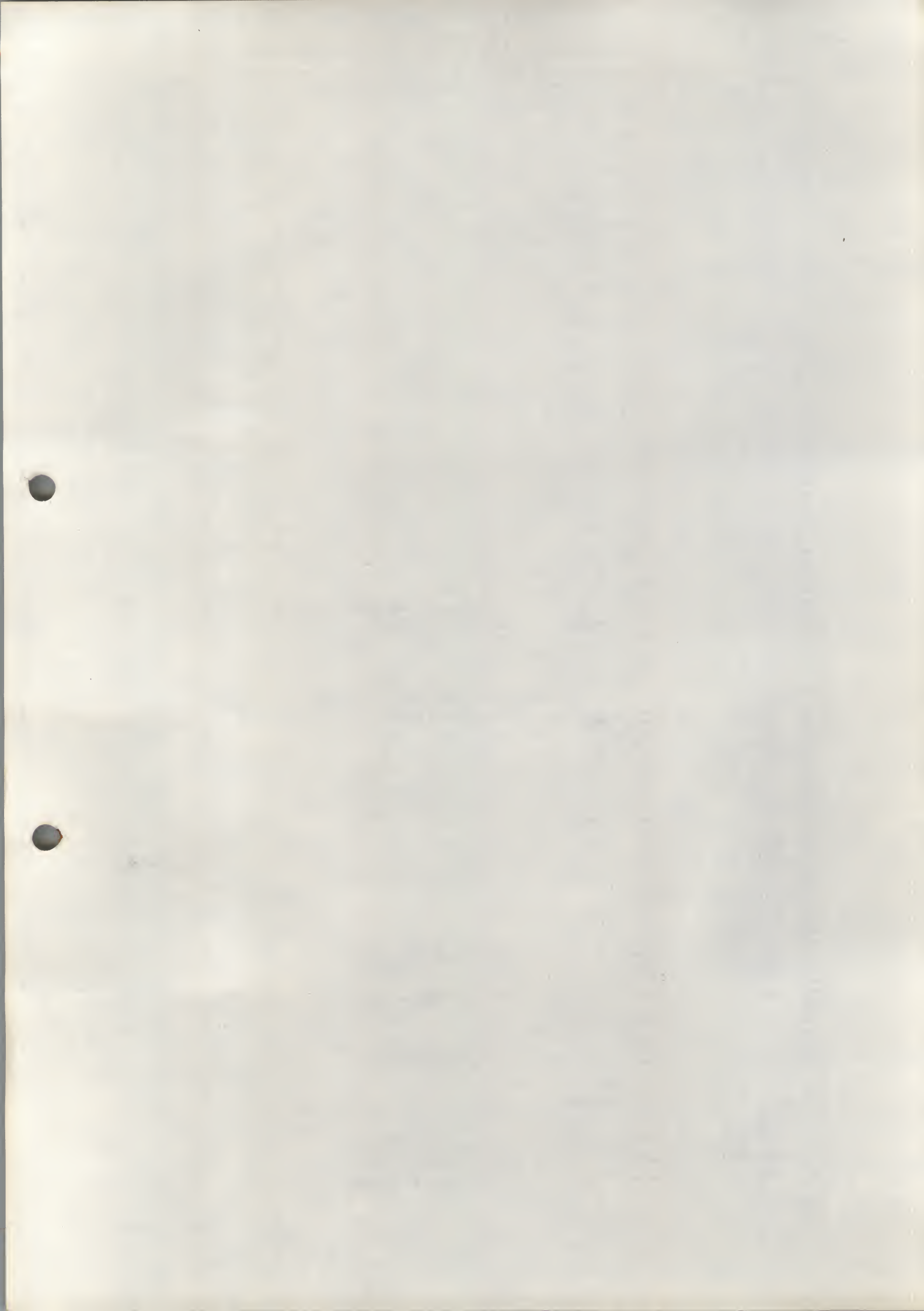
```

/YES, SKIP OVER LETTER
 /"(
 /"NORMAL" A-D CONVERSION RETURN.
 /"TEST CHARACTER BUFFER".
 /TIME (# OF CLOCK TICKS).
 IFZERO MACHINE<
 /TAB FUNCTION IS IMPLEMENTED.
 /UNIMPLEMENTED USER FUNCTION.
 IFNZRO MACHINE<
 CLS

/POINTER TO PUT CHAR ROUTINE.
 /FOR THE MISC. FUNCTIONS.

/GET A CHAR FROM THE TTY.

/GET STATUS OF LAST TICK.




```

1021          CLC
1022          ADB
1023          /GET CLOCK COUNT BUFFER.
1024          /GET CONVERSION FROM BUFFER.
1025
1026
1027
1028
1029          IFZERO MACHINE<
1030
1031          01157 6441      SKERR
1032          01160 6441      SKERR
1033          01161 6441      SKERR
1034
1035
1036
1037
1038
1039          01162 3754 03754, 3754
1040          01163 4214 04214, 4214
1041          01164 4213 04213, 4213
1042
1043
1044
1045
1046
1047
1048
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1050
1051
1052
1053
1054
1055
1056
1057
1058
1059
1060          1165          OBLOWE.
1061          1177          OBHIGH=FNEXT-1
1062
1063
1064
1065
1066
1067
1068
1069
1070
1071
1072
1073
1074          1200          PAGE
1075

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```

1076
1077
1078
1079
1080
1081
1082
1083
1084
1085
1086
1087          01200 4570 FNEXT, MUSTBE
1088          01201 3761      3761
1089          01202 4177      GOTOPR, JMS
1090          01203 4505      OPDONE, JMS I
1091          01204 3066      DCA
1092          01205 1450      TAD I
1093          01206 0272      AND
1094          01207 7650      SNA CLA
1095          01210 5220      JMP
1096          01211 1450      TAD I
1097          01212 0275      AND
1098          01213 1273      TAD
1099          01214 7120      CLL
1100          01215 1366      TAD
1101          01216 7620      SNL CLA
1102          01217 5500      JMP I
1103          01220 1066      ITSOP, TAD
1104          01221 0272      AND
1105          01222 3271      DCA
1106          01223 1450      TAD I
1107          01224 0272      AND
1108          01225 7041      CIA
1109          01226 1271      TAD
1110          01227 7720      SNA CLA
1111          01230 5247      JMP
1112          01231 1066      TAD
1113          01232 4504      JMS I
1114          01233 4035      FENTER
1115          01234 2073      FST
1116          01235 0000      FEXIT
1117          01236 1273      TAD
1118          01237 4524      JMS I
1119          01240 1274      TAD
1120          01241 4524      JMS I
1121          01242 1075      TAD
1122          01243 4504      JMS I
1123          01244 1450      TAD I
1124          01245 4504      JMS I
1125          01246 5511      JMP I
1126          01247 1066      DOITNOW, TAD
1127          01250 0070      AND
1128          01251 1274      TAD
1129          01252 7450      SNA
1130          01253 5363      JMP

```


1131	01254	7201	IAC	
1132	01255	7650	SNA CLA	
1133	01256	5321	JMP	UMOPER
1134	01257	1766	TAD	OLOOP
1135	01262	8072	AND	077
1136	01261	1276	TAD	OJUMP
1137	01262	3271	DCA	OTEMP
1138	01263	4505	JMS I	PPOP
1139	01264	3075	DCA	OPERAND+2
1140	01265	4505	JMS I	PPOP
1141	01266	3074	DCA	OPERAND+1
1142	01267	4505	JMS I	PPOP
1143	01270	3273	DCA	OPERAND
1144	01271	7422	OTEMP,	HLT
1145	01272	0720	0720,	723
1146	01273	3755	03755,	3755
1147	01274	7764	07764A,	7764
1148	01275	7077	07077,	7077
1149	01276	5677	OJUMP,	JMP I
1150	01277	1312		.*1
1151	01307	1316	PLUS	
1152	01301	1327	STAR	
1153	01302	1332	SLASH	
1154	01303	5740	UPARRY	/OR 'UPARROW' IF NO EXTENDED FNS
1155	01304	1342	RELATE	
1156	01325	1342	RELATE	
1157	01305	1342	RELATE	
1158	01307	1342	RELATE	
1159	01310	1342	RELATE	
1160	01311	1342	RELATE	
1161	01312	4435	PLUS,	
1162	01313	4073	FAD	OPERAND
1163	01314	0000	FADEXT,	FEXIT
1164	01315	5203	JMP	OPDONE
1165	01316	4435	MINUS,	FENTER
1166	01317	5073	FSS	OPERAND
1167	01320	0000	FEXIT	
1168	01321	1020	UMOPER,	TAD
1169	01322	7640		AC1
1170	01323	7330	SZA CLA	
1171	01324	1024	CLA CLL	CML RAR
1172	01325	3024	TAD	ACS
1173	01326	5203	DCA	ACS
1174	01327	4435	JMP	OPDONE
1175	01330	6073	STAR,	FENTER
1176	01331	1615	FJMP+BKW0+,-FADEXT	
1177	01332	4435	SLASH,	FENTER
1178	01333	2204	FST+FWD+SLSTMP,-	
1179	01334	3073	FLO	OPERAND
1180	01335	7202	F0V+FWD+SLSTMP,-	
1181	01336	1622	FJMP+BKW0+,-FADEXT	
1182	01337	0000	SLSTMP,01010	
1183	01340	0020		
1184	01341	0000		
1185	01342	1066	RELATE, TAD	OLOOP

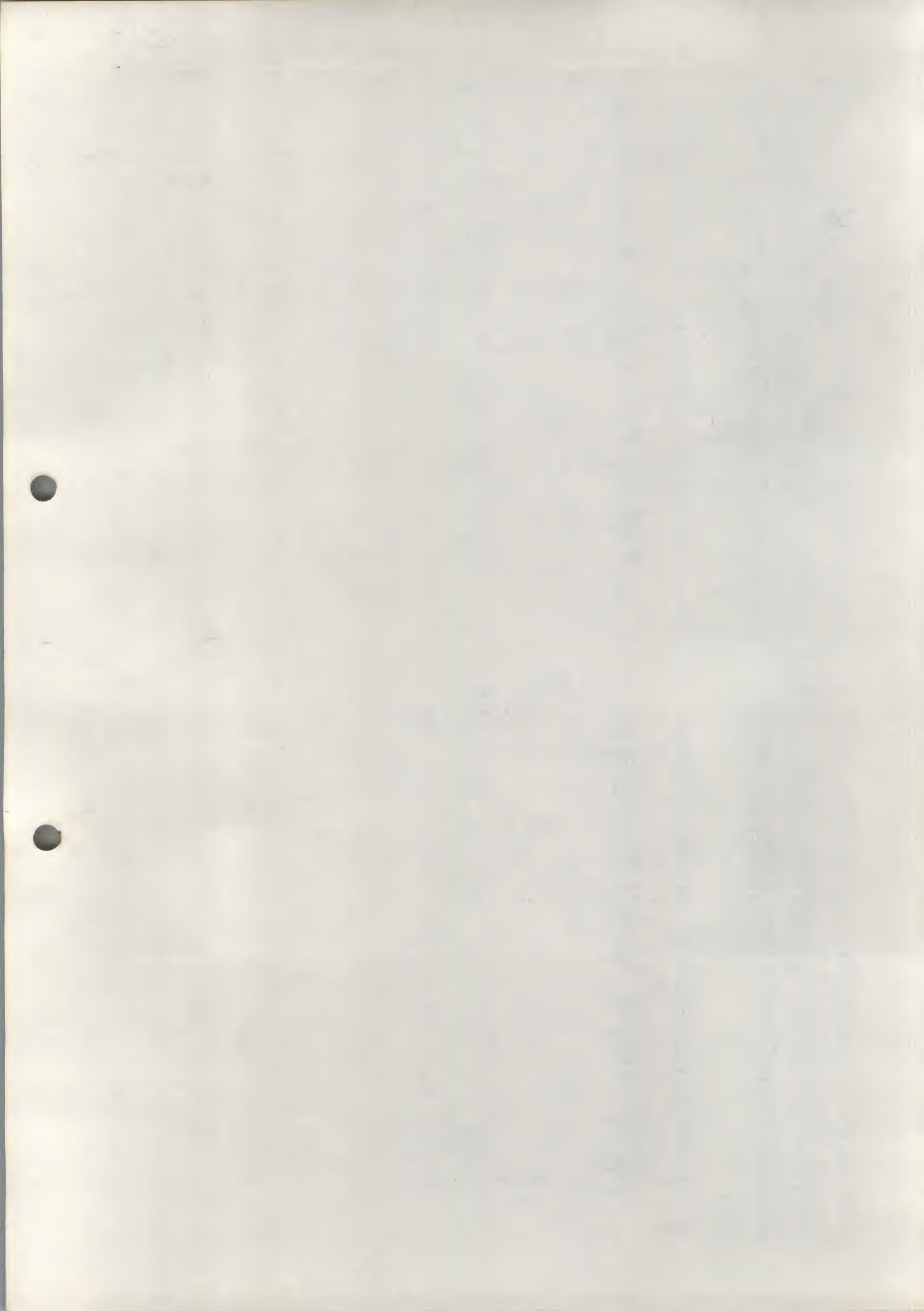
1186	01343	1367	TAD	CONST
1187	01344	3353	DCA	THESKIP
1188	01345	6201	COF	3
1189	01346	1753	TAD I	THESKIP
1190	01347	6211	COF	10
1191	01350	3353	DCA	THESKIP
1192	01351	4435	FENTER	
1193	01352	5073	FSS	OPERAND
1194	01353	7402	THESKIP, HLT	
1195	01354	1204	FJMP+FWD+4	
1196	01355	3151	FLO	ONE
1197	01356	0000	FEXIT	
1198	01357	5203	JMP	OPDONE
1199	01360	3152	FLO	ZERO
1200	01361	0000	FEXIT	
1201	01362	5203	JMP	OPDONE
1202	01363	4505	UMOPER, JMS I	PPOP
1203	01364	3066	DCA	OLOOP
1204	01365	5466	JMP I	OLOOP
1205	01366	0023	O23,	23
1206	01367	5263	CONST,	.-4100
1207	01370	0050	FSEQ	/
1208	01371	0140	FSGT	/ <
1209	01372	0110	FSLT	/ >
1210	01373	0100	FSGE	/ <=
1211	01374	0150	FSLE	/ >=
1212	01375	0040	FSNE	/ <=
1213				
1214				
1215				
1216				
1217				
1218				
1219				
1220	1400		PAGE	
1221				
1222				
1223	01400	0000	GETADDR,0	
1224	01401	6201	COF	0
1225	01402	1600	TAD I	GETADDR
1226	01403	3014	DCA	INDEX2
1227	01404	2200	ISZ	GETADDR
1228	01405	1602	TAD I	GETADDR
1229	01406	3362	DCA	GSS1
1230	01407	2200	ISZ	GETADDR
1231	01410	1600	TAD I	GETADDR

1232	01411	3363	DCA	GSS2
1233	01412	2200	ISZ	GETADDR
1234	01413	6211	COF	10
1235	01414	1414	TAD I	INDEX2
1236	01415	3067	DCA	ADDRESS
1237	01416	2067	ISZ	ADDRESS
1238	01417	1362	TAD	GSS1
1239	01420	7650	SNA CLA	
1240	01421	5260	JMP	NOSS1
1241	01422	1414	TAD I	INDEX2
1242	01423	7450	SNA	
1243	01424	5061	JMP	ALLOC
1244	01425	7140	CLL CMA	
1245	01426	1362	TAD	GSS1
1246	01427	7630	SZL CLA	
1247	01430	5372	JMP	SSERR
1248	01431	1414	TAD I	INDEX2
1249	01432	3364	DCA	GOIM2
1250	01433	1363	TAD	GSS2
1251	01434	7450	SNA	
1252	01435	5253	JMP	NOSS2
1253	01436	7141	CLL CIA	
1254	01437	1364	TAD	GOIM2
1255	01440	7620	SNA CLA	
1256	01441	5370	JMP	SSERR
1257	01442	1362	TAD	GSS1
1258	01443	7041	CIA	
1259	01444	3362	DCA	GSS1
1260	01445	7410	SKP	
1261	01446	1364	TAD	GOIM2
1262	01447	2362	ISZ	GSS1
1263	01450	5246	JMP	.-2
1264	01451	1363	TAD	GSS2
1265	01452	3362	DCA	GSS1
1266	01453	1362	TAD	GSS1
1267	01454	7104	CLL RAL	
1268	01455	1362	TAD	GSS1
1269	01456	1067	TAD	ADDRESS
1270	01457	3067	DCA	ADDRESS
1271	01460	5600	JMP I	GETADDR
1272	01461	2034	ISZ	0IMFLAG
1273	01462	7410	SKP	
1274	01463	5273	JMP	ISDIM
1275	01464	3034	DCA	0IMFLAG
1276	01465	1363	TAD	GSS2
1277	01466	7640	SZA CLA	
1278	01467	1367	TAD	013
1279	01470	3363	DCA	GSS2
1280	01471	1367	TAD	013
1281	01472	3362	DCA	GSS1
1282	01473	1363	TAD	GSS2
1283	01474	7450	SNA	
1284	01475	7201	CLA IAC	
1285	01476	7041	CIA	
1286	01477	3364	DCA	GOIM2

***** B K INSERT.

1287	01500	2134	ISZ	NOINT
1288	01501	7301	CLA CLL IAC	
1289	01502	1362	TAD	GSS1
1290	01503	7430	SZL	
1291	01504	5765	JMP I	PSPACERR
1292	01505	2364	ISZ	GOIM2
1293	01506	5302	JMP	.-4
1294	01507	3364	DCA	GOIM2
1295	01510	1364	TAD	GOIM2
1296	01511	7124	CLL CML RAL	
1297	01512	7420	SNA	
1298	01513	1364	TAD	GOIM2
1299	01514	3364	DCA	GOIM2
1300	01515	1364	TAD	GOIM2
1301	01516	7430	SZL	
1302	01517	5765	JMP I	PSPACERR
1303	01520	4504	JMS I	SLEFT
1304	01521	7410	SKP	
1305	01522	5765	JMP I	PSPACERR
1306	01523	7344	CLA CLL CMA RAL	
1307	01524	1014	TAD	INDEX2
1308	01525	3014	DCA	INDEX2
1309	01526	1023	TAD	ARRLOC
1310	01527	3414	DCA I	INDEX2
1311	01530	1362	TAD	GSS1
1312	01531	3414	DCA I	INDEX2
1313	01532	1363	TAD	GSS2
1314	01533	3414	DCA I	INDEX2
1315	01534	7240	CLA CMA	
1316	01535	1067	TAD	ADDRESS
1317	01536	3067	DCA	ADDRESS
1318	01537	1366	TAD	07774
1319	01540	3363	DCA	GSS2
1320	01541	1467	TAD I	ADDRESS
1321	01542	2067	ISZ	ADDRESS
1322	01543	4521	JMS I	PSTICKI
1323	01544	2363	ISZ	GSS2
1324	01545	5341	JMP	.-4
1325	01546	1364	TAD	GOIM2
1326	01547	7041	CIA	
1327	01550	1160	TAD	04
1328	01551	3364	DCA	GOIM2
1329	01552	4521	JMS I	PSTICKI
1330	01553	2364	ISZ	GOIM2
1331	01554	5352	JMP	.-2
1332	01555	7346	CLA CLL CMA RTL	
1333	01556	1220	TAD	GETADDR
1334	01557	3200	DCA	GETADDR
1335	01560	4543	JMS I	CNCLR
1336	01561	5201	JMP	GETADDR+1
1337	01562	0200	GSS1,	0
1338	01563	0200	GSS2,	0
1339	01564	0200	GOIM2,	0
1340	01565	0170	PSPACER, SPACERR	
1341	01566	7774	07774,	7774

/CHECK FOR CONTROL C.




```

1302 01567 3213 013, 13 / (12) IF 1 CRG INDEXING
1303 01570 4077 SSERR, JMS I PERROW
1304 01571 2325 TEXT 'SUBSCRIPT'
1305 01572 0223
1306 01573 0322
1307 01574 1120
1308 01575 2400
1309
1310
1311
1312
1313
1314 01574 1052 DEF, TAD LINENO
1315 01577 1013 DCA INDEX1
1316 01600 1413 TAD 1 INDEX1
1317 01601 7270 DCA USERFN
1318 01602 4571 GET+MUSTBE /*FN'
1319 01603 3754 3754
1320 01604 4571 GET+MUSTBE /*A VARIABLE
1321 01605 7220 7220
1322 01606 4571 GET+MUSTBE /*('
1323 01607 3753 3753
1324 01610 4571 GET+MUSTBE /*A VARIABLE
1325 01611 7220 7220
1326 01612 4571 GET+MUSTBE /*)
1327 01613 3761 3761
1328 01614 4571 GET+MUSTBE /**
1329 01615 3673 3673
1330 01616 5617 JMP I PSKIPIT
1331 01617 0467 PSKIPIT,SKIPIT
1332 01620 0200 USERFN, 0
1333 01621 4570 MORERD, MUSTBE /*,
1334 01622 3763 3763
1335 01623 4513 READ, JMS I PGETVAR
1336 01624 7240 CLA CMA
1337 01625 1245 TAD LOCCTR
1338 01626 3273 DCA LOCTMP
1339 01627 1046 TAD READLOC
1340 01630 3245 DCA LOCCTR
1341 01631 4567 GET+ISIT /*(CR) OR '\
1342 01632 2000 2000
1343 01633 7410 SKP
1344 01634 5260 JMP SEARCH
1345 01635 4566 ISIT /*A LINENO
1346 01636 0200 0200
1347 01637 7410 SKP
1348 01640 5260 JMP SEARCH
1349 01641 4566 ISIT /*,
1350 01642 3763 3763
1351 01643 5267 JMP DATAERR
1352 01644 4501 ISSOME, JMS I PEVAL
1353 01645 7240 CLA CMA
1354 01646 1045 TAD LOCCTR
1355 01647 3246 DCA READLOC
1356 01650 1273 TAD LOCTMP

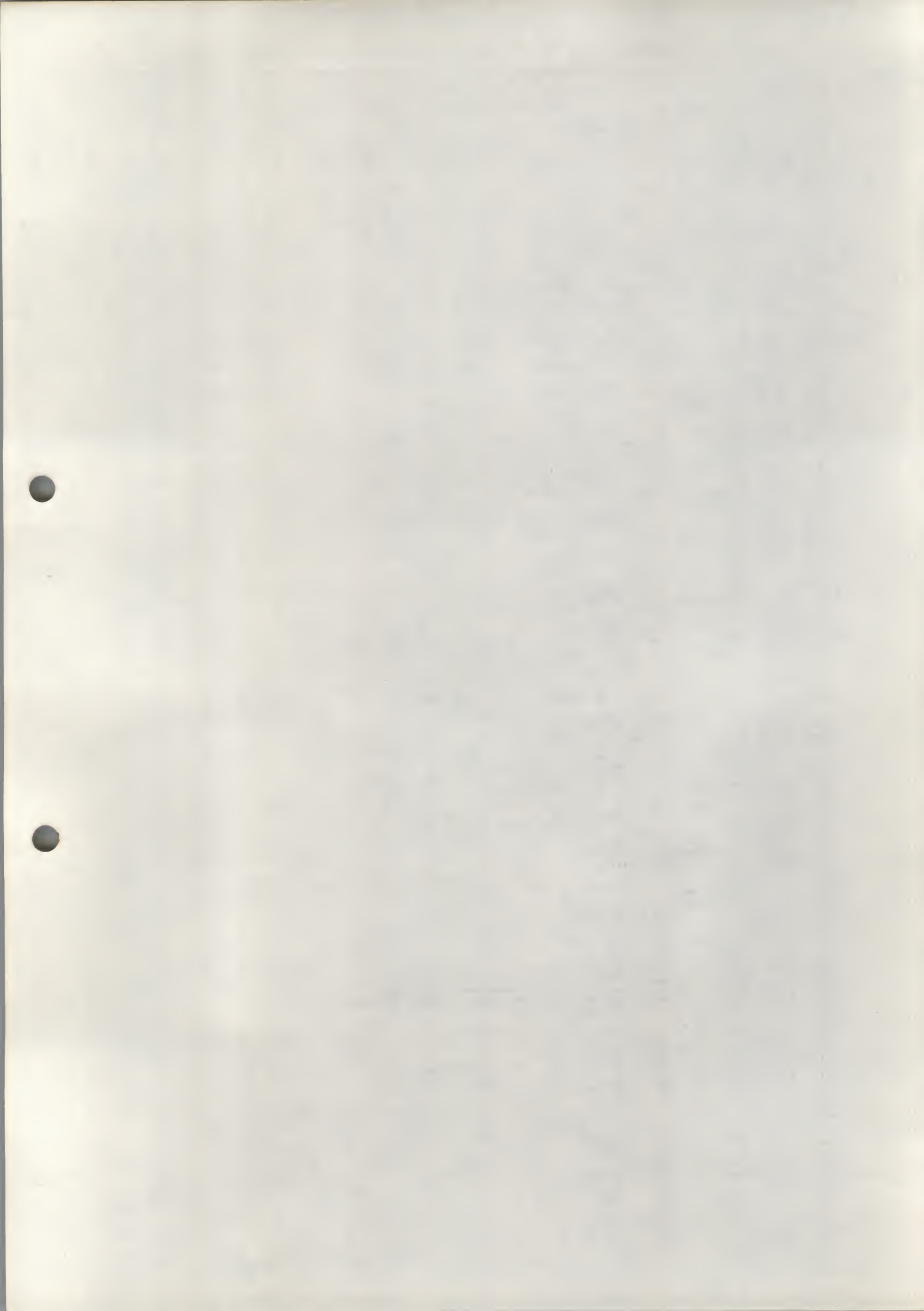
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1397 01651 3245 DCA LOCCTR
1398 01652 4512 JMS I PSTOVAR
1399 01653 4567 GET+ISIT /*(CR) OR '\
1400 01654 2000 2000
1401 01655 5221 JMP MORERD
1402 01656 5523 JMP I PEXECUTE
1403 01657 4177 SCHMR, JMS GETNO
1404 01660 4566 SEARCH, ISIT /*DATA
1405 01661 1757 1757
1406 01662 7410 SKP
1407 01663 5244 JMP ISSOME
1408 01664 4566 ISIT /*(EOF)
1409 01665 1753 1753
1410 01666 5257 JMP SCHMR
1411 01667 4477 DATAERR, JMS I PERROW
1412 01670 2401 TEXT 'DATA'
1413 01671 2401
1414 01672 0200
1415 01673 0200 LOCTMP, 0
1416 01674 2000 GETBLK, 0
1417 01675 4563 JMS I PCMKFIT
1418 01676 1024 TAD CODELOC
1419 01677 3045 DCA LOCCTR
1420 01700 1024 TAD CODELOC
1421 01701 1356 TAD ABCDEF
1422 01702 3204 DCA CODELOC
1423 01703 1024 TAD CODELOC
1424 01704 3357 DCA BCDEF
1425 01705 1025 TAD PSYMTAB
1426 01706 1356 TAD ABCDEF
1427 01707 3025 DCA PSYMTAB
1428
1429 01710 1445 GTBKLP, TAD I LOCCTR
1430 01711 2045 ISZ LOCCTR
1431 01712 3757 DCA I BCDEF
1432 01713 2357 ISZ BCDEF
1433 01714 1357 TAD BCDEF
1434 01715 7041 CIA
1435 01716 1005 TAD PSYMTAB
1436 01717 7640 SZL CLA
1437 01720 5310 JMP GTBKLP
1438
1439 01721 7240 CLA CMA
1440 01722 1026 TAD NSYMTAB
1441 01723 3206 DCA NSYMTAB
1442 01724 1165 TAD GSBPTR
1443 01725 7042 CMA
1444 01726 1164 TAD PGOLIST
1445 01727 3357 DCA BCDEF
1446 01730 1164 TAD PGOLIST
1447 01731 3250 DCA WORD
1448 01732 1356 TAD ABCDEF
1449 01733 1450 TAD I WORD
1450 01734 3450 DCA I WORD
1451 01735 2050 ISZ WORD

```

/UPDATE SYMBOL TABLE NOW.
 /BY ADDING IN CORRECTION FACTOR.
 /MOVE TEXT NOW.
 /NOW CHECK FOR END.




```
1452 01736 2357 ISZ BCDEFG
1453 01737 5332 JMP .-5
1454 01740 1063 TAD FORCT
1455 01741 3357 DCA BCDEFG
1456 01742 1362 TAD PPFORLIS
1457 01743 3052 DCA WORD
1458 01744 5352 JMP .-6
1459 01745 1356 TAD ABCDEF
1460 01746 1452 TAD I WORD
1461 01747 3452 DCA I WORD
1462 01750 2052 ISZ WORD
1463 01751 2052 ISZ WORD
1464 01752 2357 ISZ BCDEFG
1465 01753 5345 JMP .-6
1466 01754 1005 TAD PSYMTAB
1467 01755 5674 JMP I GETBLK
1468 01756 7774 ABCDEF, -4
1469 01757 0202 BCDEFG, 0
1470 01760 7726 PPFORLI, FORLIST+1
1471 01761 0202 PUTJ, 0
1472 01762 4506 JMS I PFIX
1473 01763 7202 CLA
1474 01764 1816 TAD AC3
1475 01765 4433 JMS I PPUTCH
1476 01766 4506 JMS I PANORM
1477 01767 5761 JMP I PUTJ
1478
1479
1480 01770 0202 GETJ, 0
1481 01771 4776 JMS I PBEGFIX
1482 01772 4432 JMS I PGETCH
1483 01773 3216 DCA AC3
1484 01774 4546 JMS I PANORM
1485 01775 5770 JMP I GETJ
1486
1487 01776 3762 PBEGFIX, BEGFIX
1488
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1499 2020 PAGE
1500
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1502 02020 2134 NOTNOW, ISZ NOINT
1503 02021 2050 ISZ WORD
1504 02022 1450 TAD I WORD
1505 02023 7450 SNA
1506 02024 5232 JMP INSERT
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```

/GETS A CHARACTER FROM THE TTY,
/CLEAN UP THE FAC
/FEETCH A CHAR.
/SAVE IT,
/AND NORMALIZE AC,
/AND RETURN NOW.

/RESET TC SWITCH SO NO INTERRUPT NOW.

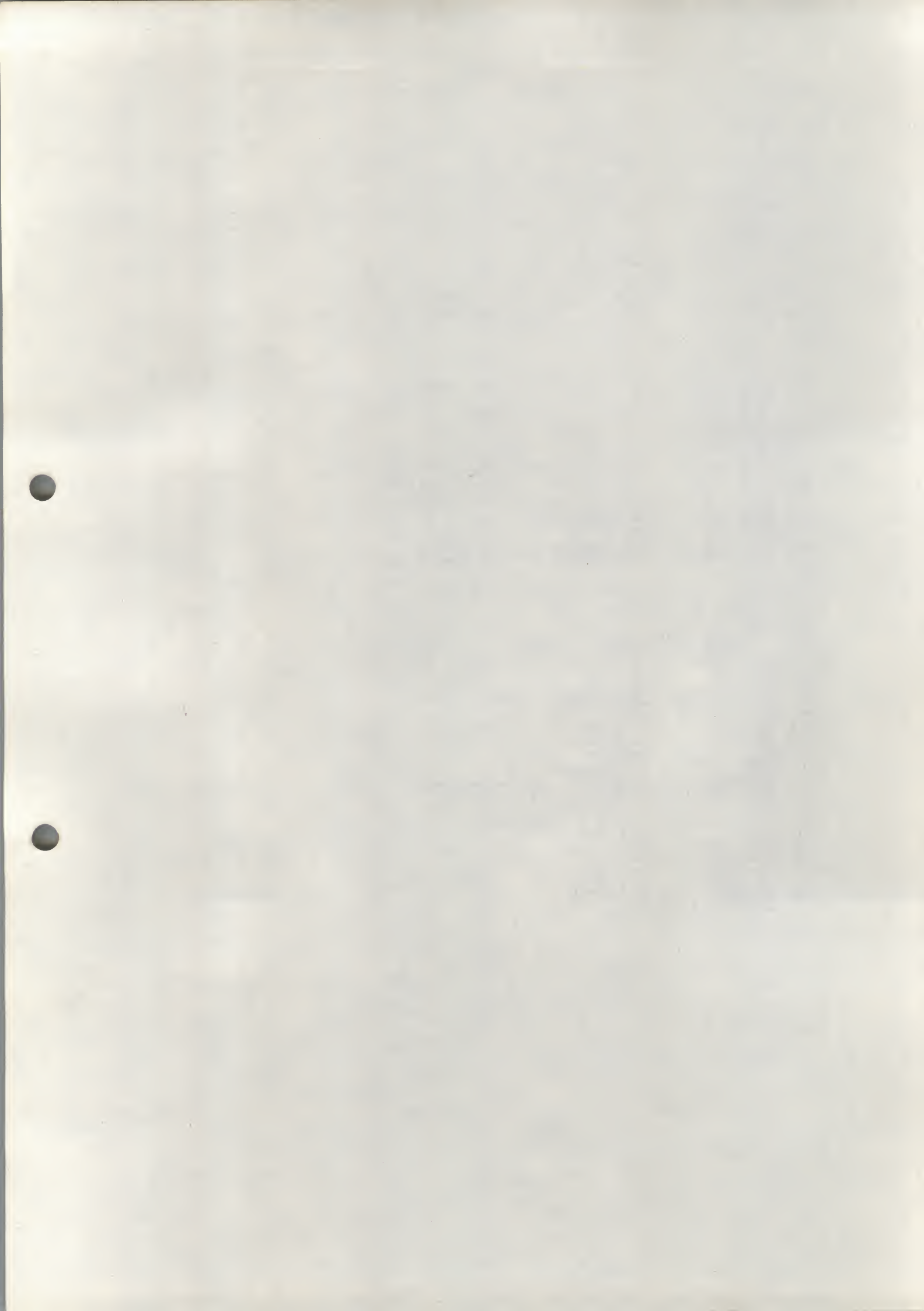
```
1527 02005 3371 DCA LOWLOC
1528 02006 3450 DCA I WORD
1529 02007 1371 TAD LOWLOC
1530 02010 3045 DCA LOCCTR
1531 02011 4510 JMS I PPASSCR
1532 02012 1371 MOVE, TAD LOWLOC
1533 02013 7041 CIA
1534 02014 1004 TAD CODELOC
1535 02015 7650 SNA CLA
1536 02016 5230 JMP INSRT5
1537 02017 7340 CLA CLL CMA
1538 02020 1371 TAD LOWLOC
1539 02021 3371 DCA LOWLOC
1540 02022 7340 CLA CLL CMA
1541 02023 1045 TAD LOCCTR
1542 02024 3045 DCA LOCCTR
1543 02025 1771 TAD I LOWLOC
1544 02026 3445 DCA I LOCCTR
1545 02027 5212 JMP MOVE
1546 02030 1045 INSRT5, TAD LOCCTR
1547 02031 3024 DCA CODELOC
1548 02032 1057 INSERT, TAD FPTR
1549 02033 1040 TAD MLINBUF
1550 02034 7040 CMA
1551 02035 3057 DCA FPTR
1552 02036 7326 CLA CLL CML RTL
1553 02037 1057 TAD FPTR
1554 02040 7450 SNA
1555 02041 5313 JMP FIXLIN
1556 02042 7040 CMA
1557 02043 4563 JMS I PCHKFIT
1558 02044 1004 TAD CODELOC
1559 02045 3045 DCA LOCCTR
1560 02046 1437 TAD I PLINBUF
1561 02047 7001 IAC
1562 02050 3013 DCA INDEX1
1563 02051 1413 TAD I INDEX1
1564 02052 3073 DCA OPERAND
1565 02053 1413 TAD I INDEX1
1566 02054 3074 DCA OPERAND+1
1567 02055 4336 JMS COMPARE
1568 02056 5261 JMP NOTFRST
1569 02057 4361 JMS SUBRA
1570 02060 5303 JMP TRANSF
1571 02061 4510 NOTFRST, JMS I PPASSCR
1572 02062 4336 JMS COMPAR
1573 02063 5261 JMP NOTFRST
1574 02064 1045 TAD LOCCTR
1575 02065 3360 DCA LSTLOC
1576 02066 1004 TAD CODELOC
1577 02067 3045 DCA LOCCTR
1578 02070 4361 JMS SUBRA
1579 02071 4177 JMS GETWD
1580 02072 1050 MOVLP, TAD WORD
1581 02073 3772 DCA I PUTLOC
```




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1562 02074 2372 ISZ PUTLOC
1563 02075 4177 JMS GETWD
1564 02076 1360 TAD LSTLOC
1565 02077 7041 CIA
1566 02100 1345 TAD LOGCTR
1567 02101 7640 SZA CLA
1568 02102 5272 JMP MOVLUP
1569 02103 1217 TRANSF, TAD PLINBUF
1570 02124 3263 DCA GPTR
1571 02125 1440 TRALUP, TAD I GPTR
1572 02126 2743 ISZ GPTR
1573 02127 3772 DCA I PUTLOC
1574 02128 2372 ISZ PUTLOC
1575 02129 2037 ISZ FPTR
1576 02130 5125 JMP TRALUP
1577 02131 4541 FIXLIN, JMS I PLINFIX
1578 02132 5520 JMP I PEDIT
1579
1580
1581
1582
1583 02115 2720 IGNORE, 0
```

/THIS ROUTINE LOOKS FOR A "\" OR A C.R.

```
1584 02116 4567 GET+ISIT
1585 02117 5820 5822 /TEXT?
1586 02120 5327 JMP NOTBAD /NOPE.
1587 02121 4177 JMS GETWD
1588 02122 1250 TAD WORD
1589 02123 2070 AND 077
1590 02124 7640 SZA CLA /END OF TEXT?
1591 02125 5321 JMP ,=4 /NOPE.
1592 02126 5316 JMP IGNORE+1 /YEP, GET NEXT ITEM.
1593
1594 02127 4575 NOTBAD, JMS I PISITLIT /IS IT A LITERAL?
1595 02130 7410 SKP
1596 02131 5316 JMP IGNORE+1 /YES.
1597 02132 4566 ISIT
1598 02133 2200 2000 /"\ OR C.R.
1599 02134 5316 JMP IGNORE+1 / N O
1600 02135 5715 JMP I IGNORE /YES. RETURN TO CALLER.
1601
1602
1603
1604
1605
1606
1607
1608 02136 0200 COMPARE, 0
1609 02137 4567 GET+ISIT /A LINENO
1610 02140 0000 0000
1611 02141 5356 JMP IAMLESS
1612 02142 1050 TAD WORD
1613 02143 7021 IAC
1614 02144 3013 DCA INDEX1
1615 02145 1413 TAD I INDEX1
1616 02146 7141 CLL CIA
1617 02147 1073 TAD OPERAND
1618 02150 7640 SZA CLA
1619 02151 5355 JMP FRSTNE
1620 02152 1413 TAD I INDEX1
1621 02153 7141 CLL CIA
1622 02154 1074 TAD OPERAND+1
1623 02155 7620 FRSTNE, SNL CLA /IS OPERAND<THIS LINENO
1624 02156 2336 IAMLESS, ISZ COMPARE /YES
1625 02157 5736 JMP I COMPARE
1626 02160 0200 LSTLOC, 0
1627 02161 0200 SUBRA, 0
1628 02162 1057 TAD FPTR
1629 02163 7120 CLL
1630 02164 1034 TAD CODELOC
1631 02165 3034 DCA CODELOC
1632 02166 1034 TAD CODELOC
1633 02167 3372 DCA PUTLOC
1634 02170 5761 JMP I SUBRA
1635 02171 0200 LOWLOC, 0
1636 02172 0200 PUTLOC, 0
1637
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1639
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1646 02173 4177 PRINT, JMS GETWD
1647 02174 7346 CLA CLL CMA RTL
1648 02175 1131 TAD OUTDEV
1649 02176 1131 TAD OUTDEV
1650 02177 1131 TAD OUTDEV
1651 02200 1361 TAD C110
1652 02201 3357 DCA T410TH
1653
1654
1655 02202 4566 ISIT
1656 02203 3763
1657 02204 5207 JMP PRINTC
1658 02205 5277 JMP PRINBLK
1659
1660
1661 02206 4177 PRINTG, JMS GETWD
1662
1663 02207 3345 PRINTC, DCA TABFLG
1664 02210 4566 ISIT
1665 02211 2000 02202
1666 02212 5210 JMP NOPCR
1667
1668 02213 4514 JMS I PPRINTXT
1669 02214 6531 CRLF
1670 02215 5523 JMP I PEXECUTE
1671
1672 02216 4566 NOPCR, ISIT
1673 02217 3763
1674 02220 5316 JMP PRENT
1675 02221 5303 JMP PRINCOM
1676
1677 02222 4566 PRINTMS, ISIT
1678 02223 5000 5000
1679 02224 5236 JMP
1680 02225 4177 PRINQUO, JMS
1681 02226 1050 TAD
1682 02227 7012 RTR
1683 02230 7012 RTR
1684 02231 7012 RTR
1685 02232 4260 JMS PRINWAF
1686 02233 1050 TAD WORD
1687 02234 4260 JMS PRINWAF
1688 02235 5225 JMP PRINWAF
1689 02236 1241 NOTTXY, TAD PRINQUO
1690 02237 5642 JMP I PRINRET
1691 02240 1207 PEVALGO, EVALGO
1692 02241 2242 PPRINRE, PRINRET
1693 02242 1345 PRINRET, TAD TABFLG

```

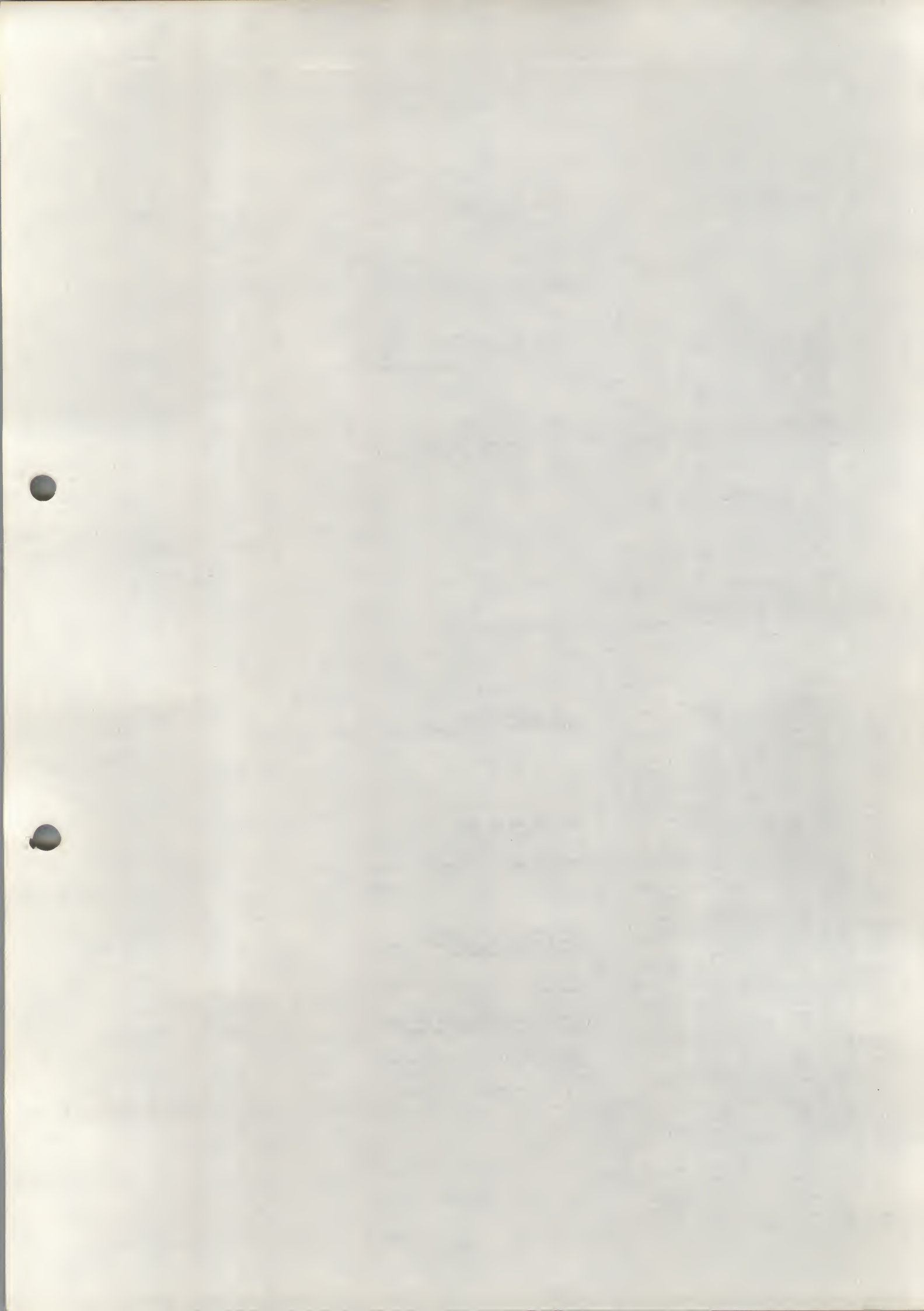
/THIS INSTRUCTION MAY BE COMBINED WITH THE GET INSTRUCTION BEL
 /7775=3 FOR DEVICE CHECK.
 /MULTIPLY DEVICE BY 3.
 /SO THAT LPT=6, PTP=3, AND TTY=0.
 /NO. ADD IN 72, THUS TTY=72, LPT=60.
 /AND SAVE FOR FUTURE USE.
 /CHECK FOR FIRST COMMA. ONCE ONLY CHECK.
 /NO. CONTINUE CHECKING.
 /YES. GIVE BLANK, THEN TAB OVER.
 /GET NEXT ELEMENT AFTER A TEXT ELEMENT.
 /RESET TAB INDICATOR.
 /CHECK TO SEE IF CARRIAGE RETURN.
 /NOT A CARRIAGE RETURN. CONTINUE CHECKING.
 /IS IT A COMMA ("")
 /NO. FINISH CHECKING BELOW.
 /IT IS, PROCESS THE COMMA NOW.
 /TEXT
 /WAS THERE A TAB PRESENT?

```

1694 02243 7640 STA CLA
1695 02244 5762 JMP I TABTHR
1696 02245 1362 TAD 014
1697 02246 4346 JMS CHECKW
1698 02247 1224 TAD ACS
1699 02250 7710 SPA CLA
1700 02251 5254 JMP
1701 02252 1051 TAD 0240
1702 02253 4433 JMS I PPUTCH
1703 02254 4517 JMS I POUTNUM
1704 02255 1051 TAD 0240
1705 02256 4433 JMS I PPUTCH
1706 02257 5207 JMP PRINTC
1707 02260 0200 PRINWAF, 0
1708 02261 0270 AND 077
1709 02262 7450 SNA
1710 02263 5206 JMP PRINTG
1711 02264 1326 TAD 007736
1712 02265 7450 SNA
1713 02266 5642 JMP I PRINWAF
1714 02267 1062 TAD 02
1715 02270 0270 AND 077
1716 02271 1051 TAD 0240
1717 02272 3024 DCA ACS
1718 02273 4346 JMS CHECKW
1719 02274 1024 TAD ACS
1720 02275 4433 JMS I PPUTCH
1721 02276 5642 JMP I PRINWAF
1722
1723 02277 7200 PRINBLK, CLA
1724 02300 1051 TAD 0240
1725 02301 4433 JMS I PPUTCH
1726 02302 4346 JMS CHECKW
1727 02303 1126 PRINCOM, TAD COLUMN
1728 02304 7450 SNA
1729 02305 5312 JMP PRINSEM
1730 02306 1327 TAD 07762
1731 02307 7502 SNA
1732 02310 5304 JMP
1733 02311 5277 JMP PRINBLK
1734
1735 02312 4567 PRINSEM, GET+ISIT
1736 02313 2000 2000
1737 02314 7410 SKP
1738 02315 5503 JMP I PEXECUTE/YES
1739 02316 4566 PRENT, ISIT
1740 02317 3762 3762
1741 02320 7410 SKP
1742 02321 5312 JMP PRINSEM/YES
1743 02322 4566 ISIT
1744 02323 3763 3763
1745 02324 5202 JMP
1746 02325 5277 JMP PRINTMS
1747 02326 7736 007736, 7736
1748 02327 7762 07762, 7762

```

/YES. EXECUTE TAB CORRECTOR.
 /SEE IF ROOM FOR 13 PLACES(1+12).
 /GO BACK AND GET NEXT.
 /GO SKIP PAST TEXT ELEMENT AND CHECK NEXT.
 /SAVE CHARACTER FOR A SECOND.
 /CHECK TO SEE IF IT'LL FIT ON THE LINE.
 /RESTORE THE CHARACTER.
 /MAKE SURE AC IS ZERO.
 /CHECK TO SEE IF ROOM FOR ONE MORE.
 /SEE IF COLUMN ON COMMA BOUNDARY.
 /YES.
 /SUBTRACT A LITTLE AN CHECK AGAIN.
 /TOO FAR?
 /NOPE.
 /YES. GIVE BLANK AND LOOP AGAIN.
 /((CR) OR "\")




```

1749 02330 0000 LINFIX, 0
1750 02331 1000 TAD. CODELOC
1751 02332 3005 DCA LOCCTR
1752 02333 4107 LFXLUP, JMS GETAO
1753 02334 1450 TAD I WORD
1754 02335 7600 SZA CLA /IS IT A LINEEND
1755 02336 5710 JMP I LINFIX /NO
1756 02337 0000 ISZ WORD
1757 02338 7200 CLA CMA
1758 02339 1005 TAD LOCCTR
1759 02340 7600 DCA I WORD
1760 02341 0000 JMS I PRSSOR
1761 02342 5000 JMP LFXLUP
1762
1763
1764 02345 0000 TABFLG, 0 /TAB FOUND FLAG.
1765
1766
1767
1768 02346 0000 CHECKW, 0 /THIS ROUTINE CHECKS FOR LINE TOO LONG.
1769 02347 1100 TAD COLUMN /GET WHERE AT NOW.
1770 02348 7000 CMA /WHEREAT-#OF PLACES IN OUT CHAN.
1771 02349 1357 TAD TWIDTH /ADD IN WIDTH OF DEVICE.
1772 02350 7700 SNA CLA /TOO BIG.
1773 02351 5700 JMP I CHECKW /NAM. RETURN TO SENDER.
1774 02352 0514 JMS I PRPRINTX /YEP.GIVE C.R.L.F.
1775 02353 6511 CRLF
1776 02354 5700 JMP I CHECKW /AND RETURN TO SENDER.
1777
1778 02357 0000 TWIDTH, 0 /IS OK SINCE IT'LL BE SET UP CORRECTLY.
1779 02358 0014 014, 14 /MAGIC CONSTANT.
1780 02359 0110 0110, 110 /WIDTH OF TTY PAPER.
1781
1782 02362 6350 TABTHR, TABDO /ROUTINE WHICH PROCESS TAB CHARACTER.
1783
1784
1785
1786
1787 02363 0073 MENOPOL,-ENDPOL-1
1788
1789 02364 0000 PUSH, 0
1790 02365 3400 DCA I POL
1791 02366 2036 ISZ POL
1792 02367 1036 TAD POL
1793 02368 1363 TAD MENOPOL
1794 02369 7600 SZA CLA
1795 02370 5764 JMP I PUSH
1796 02371 4077 JMS I PERROR
1797 02372 0530 TEXT 'EXPRESSION'
1798 02373 2022
1799 02374 0523
1800 02375 2311
1801 02400 1710
1802 02401 0000
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1816 02402 4541 EXIT, JMS I PCONT /WAIT FOR BUFFER TO EMPTY AND THEN CONTINUE.
1817 02403 1007 TAD 0215
1818 02404 4433 JMS I PPUTCH
1819 02405 1012 EDIT, TAD 0212
1820 02406 4433 JMS I PPUTCH
1821 02407 1130 TAD OUTO2
1822 02408 3131 DCA OUTDEV /RESET DEVICE
1823 02409 4543 JMS I CNCLR /CHECK TO SEE IF "C" WAS TYPED.
1824 02410 1362 TAD PXXTHEN
1825 02411 4524 JMS I PGETLIN
1826 02412 1437 TAD I PLINBUF
1827 02413 3050 DCA WORD
1828 02414 1450 TAD I WORD
1829 02415 7650 SNA CLA
1830 02416 5756 JMP I PNOTNOW
1831 02417 1210 TAD 0212
1832 02418 4433 JMS I PPUTCH
1833 02419 1130 TAD OUTO2 /RESET I/O DEVICE.
1834 02420 3131 DCA OUTDEV
1835 02421 4566 ISIT /"RUN"
1836 02422 3736
1837 02423 7410 SKP
1838 02424 5252 JMP RUN
1839 02425 4566 ISIT /"LIS"
1840 02426 3737
1841 02427 7410 SKP
1842 02428 5763 JMP I PLIST
1843 02429 4566 ISIT /"SCR"
1844 02430 3735
1845 02431 5254 JMP
1846 02432 1365 SCRATCH, TAD PPERMSY
1847 02433 3024 DCA CODELOC
1848 02434 1364 TAD PYXCF
1849 02435 3765 DCA I PPERMSY
1850 02436 1365 TAD PPERMSY
1851 02437 7201 TAD
1852 02438 3025 DCA PSYMTAB
1853 02439 7240 CLA CMA
1854 02440 3026 DCA NSYMTAB
1855 02441 4537 JMS I PRESET /RESET DEVICES AFTER SCRATCH.
1856 02442 4262 RUN, JMS CLEARV
1857 02443 5403 JMP I PEXECUTE
1858 02444 1037 INMED, TAD PLINBUF

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1859	02455	3045	DCA	LOCCTR
1860	02456	1364	TAD	PXEXEC
1861	02457	3052	DCA	LINE0
1862	02460	5503	JMP I	PEXECUTE
1863				
1864	02461	7000	PJSET,	SETUP
1865				
1866	02462	0000	CLEARV,	2
1867	02463	0061	JMS I	PJSET
1868	02464	5123	JMP	RUNIN
1869	02465	1056	RUNLUP,	TAD I
1870	02466	1364	TAD	07000A
1871	02467	7000	SZA CLA	/IS IT A VARIABLE
1872	02470	5077	JMP	RUNNOT /NO
1873	02471	2056	ISZ	EPTR
1874	02472	1456	TAD I	EPTR
1875	02473	3060	DCA	GPTR

1876	02474	1460	TAD I	GPTR
1877	02475	3056	DCA I	EPTR
1878	02476	7410	SKP	
1879	02477	2056	RUNNOT,	ISZ EPTR
1880	02500	2056		ISZ EPTR
1881	02501	2056		ISZ EPTR
1882	02502	2056		ISZ EPTR
1883	02503	2057	RUNIN,	ISZ FPTR
1884	02504	5265	JMP	RUNLUP
1885	02505	1361	TAD	PLIMIT
1886	02506	3023	DCA	ARRLOC
1887	02507	1005	TAD	PSYMTAB
1888	02510	3056	DCA	EPTR
1889	02511	1006	TAD	NSYMTAB
1890	02512	3057	DCA	FPTR
1891	02513	5143	JMP	RUN2IN
1892	02514	1456	RUN2LUP,	TAD I
1893	02515	1360	TAD	07000A
1894	02516	7640	SZA CLA	/IS IT A VARIABLE
1895	02517	5337	JMP	RUN2NOT /NO
1896	02520	2056	ISZ	EPTR
1897	02521	1456	TAD I	EPTR
1898	02522	3031	DCA	TMP
1899	02523	1203	TAD	ARRLOC
1900	02524	3456	DCA I	EPTR
1901	02525	1031	TAD	TMP
1902	02526	4521	JMS I	PSYICKI
1903	02527	4521	JMS I	PSYICKI
1904	02530	4521	JMS I	PSYICKI
1905	02531	4521	JMS I	PSYICKI
1906	02532	2056	ISZ	EPTR
1907	02533	3456	DCA I	EPTR
1908	02534	2056	ISZ	EPTR
1909	02535	3456	DCA I	EPTR
1910	02536	5342	JMP	,+4
1911	02537	2056	RUN2NOT,	ISZ EPTR
1912	02540	2056		ISZ EPTR
1913	02541	2056		ISZ EPTR
1914	02542	2056		ISZ EPTR
1915	02543	2057	RUN2IN,	ISZ FPTR
1916	02544	5314	JMP	RUN2LUP
1917	02545	1204	TAD	CODELOC
1918	02546	3045	DCA	LOCCTR
1919	02547	1125	TAD	PPDLIST
1920	02550	3236	DCA	PDL
1921	02551	1204	TAD	CODELOC
1922	02552	3246	DCA	READLOC
1923	02553	7240	CLA CMA	
1924	02554	3263	DCA	FORCT
1925	02555	1164	TAD	PGOLIST
1926	02556	3165	DCA	GSBPTR
1927	02557	5462	JMP I	CLEARV
1928	02560	7000	07000A,	7000
1929	02561	0003	PLIMIT,	LIMIT
1930	02562	7253	PXTHEN,	XXTHEN

/FIRST WORD OF USER AREA


```
1931 02563 3600 PLIST, LIST
1932 02564 7502 RYXEDF, XYEDF
1933 02565 7202 PPEHMY, PERHMY
1934 02566 2002 PNOTNOW, NOTNOW
1935 02567 4202 FAD, JMS CLEARV
1936 02570 4517 STOP, JMS I PRESET
1937 02571 4541 JMS I PCOWT
1938 02572 4514 JMS I PPRINTXT
1939 02573 4505 READY
1940 02574 5520 JMP I PEDIT
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1960 2600 PAGE
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1963
1964 02600 4561 GETLRET, JMS I PLINFX
1965 02601 4543 JMS I CNCLR
1966 02602 5603 JMP I GETLIN
1967 02603 0202 GETLIN, 0
1968 02604 3064 DCA SNUMFLG
1969 02605 1131 TAD OUTDEV
1970 02606 3130 DCA OUTD2
1971 02607 3131 DCA OUTDEV
1972 02610 1172 NEWLIN, TAD PLBEGIN
1973 02611 3056 DCA EPTR
1974 02612 1370 TAD Q40
1975 02613 3456 DCA I EPTR
1976 02614 2056 ISZ EPTR
1977 02615 4032 NEWCHAR, JMS I PGETCH
1978 02616 3456 DCA I EPTR
1979 02617 7240 CLA CHA
1980 02620 1127 TAD INDEV
1981 02621 7640 SZA CLA
1982 02622 5226 JMP **4
1983 02623 3133 DCA CNTLO
1984 02624 7201 CLA IAC
1985 02625 3131 DCA OUTDEV

/RESET ALL DEVICES NOW,
/AND WAIT FOR I/O TO FINISH UP.
/AND GIVE THE STOP MESSAGE.

/GET THE OUTPUT DEVICE.
/SAVE FOR A SECOND.
/TURN OFF THE OUTPUT DEVICE.

/CHECK THE INPUT DEVICE NOW.
/GET IT, BABY.
/IS IT THE TTY?
/NOPE.
/IT IS, RESET CONTROL 0.
/AND TEMPORARILY SET THE OUTPUT TO THE TTY.
```

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1986 02626 1456 TAD I EPTR
1987 02627 1374 TAD 07603
1988 02630 7450 SNA
1989 02631 5263 JMP ALTHODE /IS IT ALT-MODE (175)
1990 02632 1367 TAD 036 /YES
1991 02633 7450 SNA
1992 02634 5266 JMP BARROW /IS IT 'A'
1993 02635 1371 TAD 0122 /YES
1994 02636 7450 SNA
1995 02637 5300 JMP CARRET /IS IT (CAR, RET.)
1996 02640 1375 TAD 07715 /YES
1997 02641 7450 SNA
1998 02642 5215 JMP NEWCHAR /IS IT '0'
1999 02643 0372 AND 01408 /YES
2000 02644 7440 SZA
2001 02645 1363 TAD 076408
2002 02646 7640 SZA CLA /IS IT A PRINTABLE CHARACTER
2003 02647 5215 JMP NEWCHAR /NO
2004 02650 1456 TAD I EPTR
2005 02651 4033 JMS I PPUTCH
2006 02652 1056 TAD EPTR
2007 02653 2056 ISZ EPTR
2008 02654 1174 TAD MLEND
2009 02655 7640 SZA CLA
2010 02656 5215 JMP NEWCHAR
2011 02657 4537 TUBIG, JMS I PRESET
2012 02660 4514 JMS I PPRINTXT
2013 02661 5162 TOOLONG
2014 02662 5210 JMP NEWLIN
2015 02663 4514 ALTHODE, JMS I PPRINTXT
2016 02664 6501 DELETED
2017 02665 5210 JMP NEWLIN
2018 02666 1056 BARROW, TAD EPTR
2019 02667 1173 TAD MLBEGIN
2020 02670 7650 SNA CLA
2021 02671 5215 JMP NEWCHAR
2022 02672 7240 CLA CHA
2023 02673 1056 TAD EPTR
2024 02674 3056 DCA EPTR
2025 02675 1373 TAD 03737B
2026 02676 4033 JMS I PPUTCH
2027 02677 5215 JMP NEWCHAR
2028 02720 1007 CARRET, TAD 0215
2029 02701 4033 JMS I PPUTCH
2030 02702 2134 ISZ NOINT
2031 02703 1172 TAD PLBEGIN /EPTR=BEGINNING OF STRING
2032 02704 3056 DCA EPTR /EPTR=WHERE TRANSLATED SYMBOL GOES
2033 02705 1037 TAD PLINBUF /GPRE=CHAR IN STRING (GE, EPTR)
2034 02706 3057 DCA EPTR /HPTR=POSITION IN TABLE
2035 02707 1377 SLOOP, TAD PTABLE
2036 02710 3061 DCA HPTR
2037 02711 1256 GLOOP, TAD EPTR
2038 02712 3060 DCA GPTR
2039 02713 1461 TAD I HPTR
2040 02714 7650 SNA CLA

/SET FLAG TO PREVENT INTERRUPTS AS OF NOW.
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2041 02715 5776 JMP I POTHER
2042 02716 1061 TAD HPTR
2043 02717 3050 DCA WCRD
2044 02720 2041 ISZ HPTR
2045 02721 3024 DCA ACS
2046 02722 1460 HLOOP, TAD I GPTH
2047 02723 1054 TAD Q7740
2048 02724 7440 SZA CLA
2049 02725 5330 JMP BSKIP
2050 02726 2060 ISZ GPTH
2051 02727 5322 JMP HLOOP
2052 02730 7330 BSKIP, CLA CLL CML RAR
2053 02731 1724 TAD ACS
2054 02732 3424 DCA ACS
2055 02733 1461 TAD I HPTR
2056 02734 7430 SZL
2057 02735 2041 ISZ HPTR
2058 02736 7438 SZL
2059 02737 5343 JMP .+4
2060 02742 7012 RTR
2061 02741 7012 RTR
2062 02742 7012 RTR
2063 02743 0270 AND Q77
2064 02744 7450 SNA
2065 02745 5766 JMP I JMATCH
2066 02746 1054 TAD Q7740
2067 02747 7450 SNA
2068 02750 5330 JMP BSKIP
2069 02751 0270 AND Q77
2070 02752 1370 TAD Q40
2071 02753 7241 CIA
2072 02754 1460 TAD I GPTH
2073 02755 2060 ISZ GPTH
2074 02756 7650 SNA CLA
2075 02757 5322 JMP HLOOP
2076 02760 1461 TAD I HPTR
2077 02761 0270 AND Q77
2078 02762 2061 ISZ HPTR
2079 02763 7640 D7640B, SZA CLA
2080 02764 5360 JMP .+4
2081 02765 5311 JMP GLOOP
2082 02766 6506 JMATCH, AMATCH
2083 02767 0036 Q36, 36
2084 02770 0240 Q40, 40
2085 02771 0122 Q122, 122
2086 02772 0140 Q140B, 140
2087 02773 3737 Q3737B, 3737
2088 02774 7603 Q7603, 7603
2089 02775 7715 Q7715, 7715
2090 02776 3200 POTHER, OTHER
2091 02777 7223 PTABLE, KXPLUS
2092
2093
2094
2095
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2096
2097
2098
2099 3000 PAGE
2100
2101
2102
2103 03000 0310 OTHER, JMS NONBLNK
2104 03001 1301 TAD Q7763B
2105 03002 7440 SZA
2106 03003 5223 JMP NOTCR
2107 03004 1325 TAD PXXCRLF
2108 03005 3457 DCA I FPTH
2109 03006 1057 TAD FPTH
2110 03007 3013 DCA INDEX1
2111 03010 1326 TAD PXXEXIT
2112 03011 3413 DCA I INDEX1
2113 03012 1013 TAD INDEX1
2114 03013 1041 TAD MENOLIN
2115 03014 7450 SNA
2116 03015 5622 JMP I PGETLRET
2117 03016 7710 SPA CLA
2118 03017 5210 JMP .+7
2119 03020 5621 JMP I PTUBIG
2120 03021 2657 PTUBIG, TUBIG
2121 03022 2600 PGETLRE, GETLRET
2122 03023 1322 NOTCR, TAD Q7737
2123 03024 7450 SNA
2124 03025 5724 JMP I JDIGIT
2125 03026 1302 TAD Q7764B
2126 03027 7100 CLL
2127 03030 1065 TAD Q12
2128 03031 7430 SZL
2129 03032 5724 JMP I JDIGIT
2130 03033 1300 TAD Q77254
2131 03034 7100 CLL
2132 03035 1321 TAD Q32
2133 03036 7450 SZL
2134 03037 5703 JMP I PLETTER
2135 03040 7330 CLA CLL CML RAR
2136 03041 1456 TAD I EPTH
2137 03042 3456 DCA I EPTH
2138 03043 1076 REMPACK, TAD PTEXT
2139 03044 3457 OCA I FPTH
2140 03045 2057 ISZ FPTH
2141 03046 3307 TXTPAK, DCA THISTXT
2142 03047 1456 TAD I EPTH
2143 03050 1301 TAD Q7763B
2144 03051 7450 SNA
2145 03052 5276 JMP CRINTXT
2146 03053 1304 TAD Q7753
2147 03054 7650 SNA CLA
2148 03055 5370 JMP DOINTXT
2149 03056 1456 TAD I EPTH
2150 03057 0270 AND Q77
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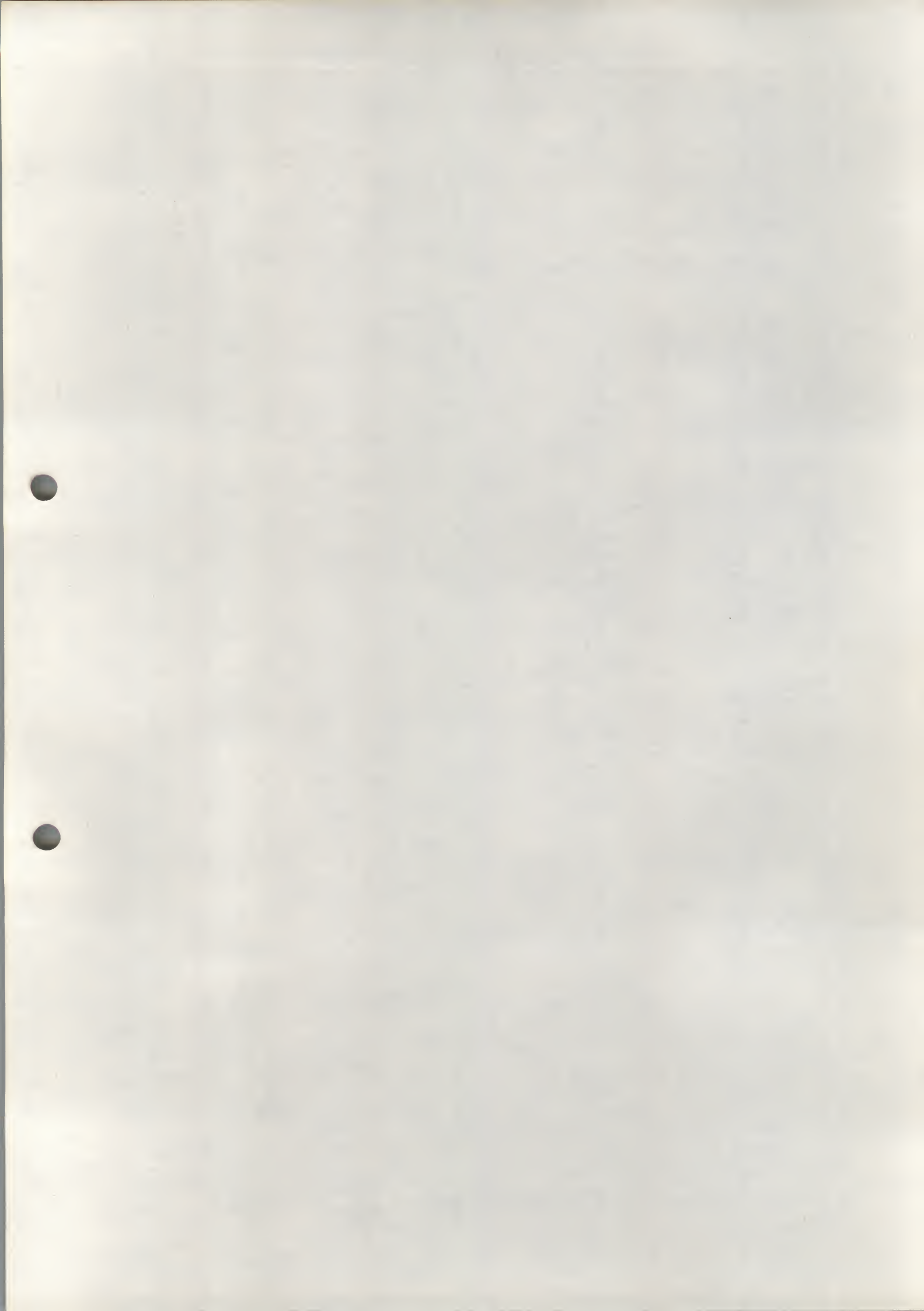
2151 03060 3456 DCA I EPTR
2152 03061 1307 TAD THISTXT
2153 03062 7450 SNA
2154 03063 5270 JMP LHALF
2155 03064 1456 TAD I EPTR
2156 03065 3457 DCA I EPTR
2157 03066 2057 ISZ EPTR
2158 03067 5274 JMP RHALF
2159 03070 1456 LHALF, TAD I EPTR
2160 03071 7100 CLL RTL
2161 03072 7000 RTL
2162 03073 7000 RTL
2163 03074 2056 RHALF, ISZ EPTR
2164 03075 5046 JMP TXPAK
2165 03076 1307 CRINTXT, TAD THISTXT
2166 03077 5723 JMP I JTXIT
2167
2168 03100 7725 07725A, 7725
2169 03101 7763 07763B, 7763
2170 03102 7764 07764B, 7764
2171
2172
2173 03103 3446 PLETTER, LETTER
2174 03104 7753 07753, 7753
2175 03105 4200 04200, 4200
2176 03106 042 042, 42
2177 03107 0200 THISTXT, 0
2178 03110 0200 NONBLNK, 0
2179 03111 1456 TAD I EPTR
2180 03112 1054 TAD 07740
2181 03113 7640 SZA CLA
2182 03114 5317 JMP ,+3
2183 03115 2056 ISZ EPTR
2184 03116 5311 JMP NONBLNK+1
2185 03117 1456 TAD I EPTR
2186 03120 5710 JMP I NONBLNK
2187 03121 0032 032, 32
2188 03122 7737 07737, 7737
2189 03123 3201 JTXIT, MTXIT
2190 03124 3204 JOIGIT, DIGIT
2191 03125 7226 PXXCRLF, XXCRLF
2192 03126 7505 PXXEXIT, XXEXIT
2193 03127 0072 POPERA, OPERAND-1
2194 03130 7506 PXXLIT0, XXLIT0
2195 03131 4435 LITRAL, FENTER
2196 03132 2073 FST OPERAND
2197 03133 0000 FEXIT
2198 03134 1275 TAD OPERAND+2
2199 03135 7640 SZA CLA
2200 03136 5346 JMP ALL3
2201 03137 1074 TAD OPERAND+1
2202 03140 7640 SZA CLA
2203 03141 5347 JMP JUST2
2204 03142 1073 TAD OPERAND
2205 03143 7650 SNA CLA

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2206 03144 5350 JMP JUST0
2207 03145 7340 JUST1, CLA CLL CMA RAL
2208 03146 7001 ALL3, IAC
2209 03147 1062 JUST2, TAD 02
2210 03150 7040 JUST0, CMA
2211 03151 3031 DCA TMP

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2212 03152 1327 TAD POPERA
2213 03153 3015 DCA INDEX1
2214 03154 1011 TAD TMP
2215 03155 7000 CMA
2216 03156 1330 TAD PXXLIT0
2217 03157 5763 JMP JUSTOP
2218 03160 6001 JUSTOP, CDF 0 ***** 8 K INSERT.
2219 03161 1013 TAD I INDEX1 ***** 8 K INSERT.
2220 03162 6011 CDF 12
2221 03163 3057 JUSTOP, DCA I EPTR
2222 03164 2757 ISZ EPTR
2223 03165 2701 ISZ TMP
2224 03166 5160 JMP JUSTOP
2225 03167 5516 JMP I PSLOOP
2226
2227
2228 03170 1327 COINTXT, TAD THISTXT
2229 03171 2056 ISZ EPTR
2230 03172 7000 SZA
2231 03173 5376 JMP ,+3
2232 03174 1305 TAD 04200
2233 03175 5703 JMP I JTXXIT
2234 03176 1306 TAD 002
2235 03177 3057 DCA I EPTR
2236 03200 2057 ISZ EPTR
2237 03201 3057 MTXXIT, DCA I EPTR
2238 03202 2257 ISZ EPTR
2239 03203 5516 JMP I PSLOOP
2240
2241
2242
2243 03204 7000 DIGIT, CLA
2244 03205 1000 TAD I SNUMFLG
2245 03206 1376 TAD 01774
2246 03207 7000 SZA /IS IT 'GOTO' OR 'THEN'
2247 03210 7001 IAC
2248 03211 7002 SZA /OR 'GOSUB'
2249 03212 1375 TAD 01742
2250 03213 7050 SNA CLA /OR 'LIST'
2251 03214 7000 CLA CMA /YES
2252 03215 3000 DCA SNUMFLG
2253 03216 0035 FENTER
2254 03217 3152 FLD ZERO
2255 03220 0000 FEXIT
2256 03221 3305 DCA DPFLAG
2257 03222 3306 DCA DECFLAG
2258 03223 7010 SKP
2259 03224 2056 DIGIN, ISZ EPTR
2260 03225 4522 JMS I PNONBLNK
2261 03226 1310 TAD 07673
2262 03227 7050 SNA
2263 03230 5203 JMP ITSE
2264 03231 1370 TAD 027
2265 03232 7050 SNA
2266 03233 5256 JMP ITSDP
```

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2267 03234 1374 TAD 07764C
2268 03235 7100 CLL
2269 03236 1005 TAD 012
2270 03237 7020 SNL
2271 03242 5331 JMP ENDDNUM
2272 03241 7110 CLL RAR
2273 03242 1373 TAD 02040A
2274 03243 3300 DCA FDIGIT
2275 03244 7010 RAR
2276 03245 3301 DCA FDIGIT+1
2277 03246 4035 FENTER
2278 03247 6505 FMPI PTEN
2279 03250 4310 PAD+FWD+FDIGIT-.
2280 03251 0000 FEXIT
2281 03252 1305 TAD DPFLAG
2282 03253 7000 SZA CLA
2283 03254 2306 ISZ DECFLAG
2284 03255 5224 JMP DIGIN
2285 03256 1305 ITSDP, TAD DPFLAG
2286 03257 7000 SZA CLA
2287 03260 5331 JMP ENDDNUM
2288 03261 2305 ISZ DPFLAG
2289 03262 5224 JMP DIGIN
2290 03263 3300 ITSE, DCA FDIGIT
2291 03264 1004 TAD SNUMFLG
2292 03265 7000 SZA CLA
2293 03266 5331 JMP ENDDNUM
2294 03267 2056 ISZ EPTR
2295 03270 4522 JMS I PNONBLNK
2296 03271 1371 TAD 077258
2297 03272 7050 SNA
2298 03273 5300 JMP ITSP
2299 03274 1372 TAD 07776
2300 03275 7000 SZA CLA
2301 03276 5301 JMP NOTSGN
2302 03277 2300 ISZ FDIGIT
2303 03300 2056 ITSP, ISZ EPTR
2304 03301 4767 NOTSGN, JMS I JISDIG
2305 03302 5331 JMP ENDDNUM
2306 03303 2056 ISZ EPTR
2307 03304 3301 DCA FDIGIT+1
2308 03305 4767 JMS I JISDIG
2309 03306 5322 JMP ONLY1
2310 03307 7000 CLA
2311 03310 1301 TAD FDIGIT+1
2312 03311 7100 CLL RTL
2313 03312 1301 TAD FDIGIT+1
2314 03313 7100 CLL RAL
2315 03314 3301 DCA FDIGIT+1
2316 03315 4767 JMS I JISDIG
2317 03316 7073 07673, 7673
2318 03317 1301 TAD FDIGIT+1
2319 03320 3301 DCA FDIGIT+1
2320 03321 2056 ISZ EPTR
2321 03322 1300 ONLY1, TAD FDIGIT
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2322	03323	7110	CLL	RAR	
2323	03324	1361	TAD		FDIGIT+1
2324	03325	7420	SNL		
2325	03326	7241	CIA		
2326	03327	1360	TAD		DECFRAC
2327	03330	3366	DCA		DECFRAC
2328	03331	7200	ENDNUM,	CLA	
2329	03332	1366	TAD		DECFRAC
2330	03333	7700	SMA	CLA	
2331	03334	1364	TAD		DIVXTEN
2332	03335	1363	TAD		MULXTEN
2333	03336	3366	CCA		MULXP
2334	03337	1366	TAD		DECFRAC
2335	03340	7510	SPA		
2336	03341	7241	CIA		
2337	03342	7240	CM1		
2338	03343	3366	CCA		DECFRAC
2339	03344	5350	JMP		.00
2340	03345	4435	FENTER		
2341	03346	7400	MULXP,	HLT	
2342	03347	0000	FEXIT		
2343	03350	2360	ISZ		DECFRAC
2344	03351	5345	JMP		.00
2345	03352	2064	ISZ		SNUMFLG
2346	03353	5777	JMP I		PLITRAL
2347	03354	4506	JMS I		PFIX
2348	03355	7200	CLA		
2349	03356	5757	JMP I		PCOMMON
2350	03357	3400	PCOMMON,COMMON		
2351	03360	0000	FDIGIT, 01010		
2352	03361	0000			
2353	03362	0000			
2354	03363	6545	MULXTEN,FMP1		PTEN
2355	03364	1000	DIVXTEN,F0V-FMP		
2356	03365	0000	OPFLAG, 0		
2357	03366	0000	DECFRAC,0		
2358	03367	6532	JISDIG, ISDIG		
2359	03370	0027	027,	27	
2360	03371	7725	07725B, 7725		
2361	03372	7776	07776, 7776		
2362	03373	2040	02040A, 2040		
2363	03374	7764	07764C, 7764		
2364	03375	1742	01742, 1742		
2365	03376	1774	01774, 1774		
2366	03377	3131	PLITRAL,LITRAL		
2367					
2368					
2369					
2370					
2371					
2372					
2373					
2374					
2375	3400		PAGE		
2376					

2377	03400	1025	COMMON,	TAD	PSYMTAB
2378	03401	3060		DCA	GPTR
2379	03402	1000		TAD	NSYMTAB
2380	03403	3061		DCA	MPTR
2381	03404	5231		JMP	IN
2382	03405	1460	LUP,	TAD I	GPTR
2383	03406	2060		ISZ	GPTR
2384	03407	2060		ISZ	GPTR
2385	03410	7640		SZA CLA	
2386	03411	5227		JMP	NOT
2387	03412	1460		TAD I	GPTR
2388	03413	2060		ISZ	GPTR
2389	03414	7241		CIA	
2390	03415	1017		TAD	AC2
2391	03416	7640		SZA CLA	
2392	03417	5230		JMP	NOT+1
2393	03420	1460		TAD I	GPTR
2394	03421	7241		CIA	
2395	03422	1016		TAD	AC3
2396	03423	7640		SZA CLA	
2397	03424	5230		JMP	NOT+1
2398	03425	7346		CLA CLL	CHA RTL
2399	03426	5312		JMP	ISDEF2
2400	03427	2060	NOT,	ISZ	GPTR
2401	03430	2060		ISZ	GPTR
2402	03431	2061	IN,	ISZ	MPTR
2403	03432	5205		JMP	LUP
2404	03433	4515		JMS I	PGETBLK
2405	03434	3064		DCA	SNUMFLG
2406	03435	3464		DCA I	SNUMFLG
2407	03436	1064		TAD	SNUMFLG
2408	03437	3213		DCA	INDEX1
2409	03440	3413		DCA I	INDEX1
2410	03441	1017		TAD	AC2
2411	03442	3413		DCA I	INDEX1
2412	03443	1016		TAD	AC3
2413	03444	3413		DCA I	INDEX1
2414	03445	5314		JMP	ITSDEF
2415	03446	7001	LETTER,	IAC	
2416	03447	7100		CLL RTL	
2417	03450	7000		RTL	
2418	03451	7200		RTL	
2419	03452	3031		DCA	TMP
2420	03453	2056		ISZ	EPTR
2421	03454	4522		JMS I	PNOBBLNK
2422	03455	1273		TAD	07726C
2423	03456	7100		CLL	
2424	03457	1065		TAD	012
2425	03460	7620		SNL CLA	
2426	03461	5266		JMP	SIMPLY
2427	03462	1456		TAD I	EPTR
2428	03463	1031		TAD	TMP
2429	03464	3031		DCA	TMP
2430	03465	2056		ISZ	EPTR
2431	03466	1005	SIMPLY, TAD		PSYMTAB


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2432 03667 3240 DCA GPTR
2433 03670 1000 TAD NSYMTAB
2434 03671 3261 DCA HPTR
2435 03672 5324 JMP VSCHIN
2436 03673 7726 07700C, 7726
2437 03674 7000 070020, 7000
2438 03675 1440 VSCHLUP, TAD I GPTR
2439 03676 1274 TAD 070208
2440 03677 7640 SZA CLA
2441 03680 5320 JMP VSCHNOT
2442 03681 2060 ISZ GPTR
2443 03682 1440 TAD I GPTR
2444 03683 3264 DCA SNUMFLG
2445 03684 1440 TAD I SNUMFLG
2446 03685 7241 CIA
2447 03686 1031 TAD TMP
2448 03687 7640 SZA CLA
2449 03688 5321 JMP VSCHNOT+1
2450 03689 7240 CLA CMA
2451 03690 1240 ISDEF2, TAD GPTR
2452 03691 3264 DCA SNUMFLG
2453 03692 1040 ITSDEF, TAD SNUMFLG
2454 03693 3457 DCA I
2455 03694 2057 ISZ FPTR
2456 03695 5516 JMP I PSLOOP
2457 03696 2060 VSCHNOT, ISZ GPTR
2458 03697 2060 ISZ GPTR
2459 03698 2060 ISZ GPTR
2460 03699 2260 VSCHIN, ISZ HPTR
2461 03700 2061 JMP VSCHLUP
2462 03701 5275 JMS I PGETBLK
2463 03702 4515 DCA SNUMFLG
2464 03703 3264 CLA CMA
2465 03704 7240 TAD SNUMFLG
2466 03705 1264 DCA INDEX1
2467 03706 3013 TAD 01000
2468 03707 1350 DCA I INDEX1
2469 03708 3413 TAD ARRLOC
2470 03709 1003 DCA I INDEX1
2471 03710 3413 DCA I INDEX1
2472 03711 3413 DCA I INDEX1
2473 03712 3413 JMS I PCCHKFIT
2474 03713 4503 TAD TMP
2475 03714 1031 JMS I PSTICKI
2476 03715 4521 JMS I PSTICKI
2477 03716 4521 JMS I PSTICKI
2478 03717 4521 JMS I PSTICKI
2479 03718 4521 JMS I PSTICKI
2480 03719 5314 JMP ITSDEF
2481 03720 1000 01000, 1000
2482 03721 0000 POP, 0
2483 03722 7240 CLA CMA
2484 03723 1036 TAD PDL
2485 03724 3036 DCA PDL
2486 03725 1436 TAD I PDL
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2487 03556 5751 JMP I POP
2488 03557 3737 FOURLF, TEXT '....'
2489 03558 3737
2490 03559 0000
2491 03560 3724 UGH1, TEXT 'TOO BIG. LINE IGNORED.'
2492 03561 1717
2493 03562 4002
2494 03563 1107
2495 03564 5640
2496 03565 1411
2497 03566 1605
2498 03567 4011
2499 03568 0716
2500 03569 1722
2501 03570 0504
2502 03571 3700
2503
2504
2505
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2508
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2510
2511
2512 3600 PAGE
2513
2514
2515 03600 1740 LIST, TAD I PXLINBUF
2516 03601 3250 DCA WORD
2517 03602 4566 ISIT /CHECK FOR A " "
2518 03603 3476 3476
2519 03604 5210 JMP .+4 /NOPE.
2520 03605 7240 CLA CMA /YEP, SET UP PUTXRA BY GIVING A PHOONEY
2521 03606 4541 JMS I PCOWT /CALL TO THE WAIT ROUTINE.
2522 03607 4177 JMS GETWD /AND GET ANOTHER WORD NOW.
2523 03608 4566 ISIT /LINE0
2524 03609 0000 0000
2525 03610 5216 JMP LISTALL
2526 03611 2250 ISZ WORD
2527 03612 1450 TAD I WORD
2528 03613 7450 SNA
2529 03614 1024 LISTALL, TAD CODELOC
2530 03615 3245 LISTSCM, DCA LOCCTR
2531 03616 4177 LISTLUP, JMS GETWD
2532 03617 4566 ISIT /(EOF)
2533 03618 1755 1755
2534 03619 5230 JMP LNOEND /NOT DONE YET
2535 03620 4541 JMS I PCOWT /WAIT FOR I/O TO FINISH AND CLEAN UP.
2536 03621 4302 JMS PRINTXT
2537 03622 3557 FOURLF
2538 03623 5520 JMP I PEDIT
2539 03624 4566 LNOEND, ISIT /A LINE0
2540 03625 0000 0000
2541 03626 5240 JMP LIST2 /NO
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2542 03633 1050 TAD WORD
2543 03634 4593 JMS I PPRINUM
2544 03635 1071 TAD Q202
2545 03636 4433 JMS I PPUTCH
2546 03637 9220 JMP LISTLUP
2547 03640 4566 LIST2, ISIT /A VARIABLE
2548 03641 7000
2549 03642 5255 JMP LIST3
2550 03643 2053 ISZ WORD
2551 03644 1442 TAD I WORD
2552 03645 3000 DCA WORD
2553 03646 1442 TAD I WORD
2554 03647 3053 DCA PRINVAR
2555 03650 4302 JMS PRINTXT
2556 03651 3653 PRINVAR
2557 03652 5220 JMP LISTLUP
2558 03653 0000 PRINVAR,0
2559 03654 0000 0
2560 03655 4575 LIST3, JMS I RISITLIT /ISIT A LITERAL
2561 03656 5261 JMP LIST4 /NO
2562 03657 4517 JMS I POUTNUM /PRINT IT
2563 03660 5220 JMP LISTLUP
2564 03661 4566 LIST4, ISIT /TEXT
2565 03662 5000
2566 03663 5276 JMP LIST5
2567 03664 4177 L4LUP, JMS GETWD
2568 03665 1050 TAD WORD
2569 03666 3253 DCA PRINVAR
2570 03667 4302 JMS PRINTXT
2571 03670 3653 PRINVAR
2572 03671 1050 TAD WORD
2573 03672 0073 AND 077
2574 03673 7640 SZA CLA
2575 03674 5264 JMP L4LUP
2576 03675 5220 JMP LISTLUP
2577 03676 1050 LIST5, TAD WORD /ITS A SYSTEM SYMBOL
2578 03677 7201 IAC
2579 03700 4302 JMS PRINTXT

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2580 03701 5220 JMP LISTLUP
2581 03702 0000 PRINTXT,0
2582 03703 7440 SZA
2583 03704 5310 JMP JBSENT+1 //***** 8 K INSERT,
2584 03705 6201 CDF 0 //***** 8 K INSERT,
2585 03706 1702 TAD I PRINTXT
2586 03707 2322 JBSENT, ISZ PRINTXT
2587 03710 3042 DCA PRTEMP
2588 03711 1442 PRLOOP, TAD I PRTEMP
2589 03712 7012 RTR
2590 03713 7012 RTR
2591 03714 7012 RTR
2592 03715 4324 JMS PRSUBR
2593 03716 1442 TAD I PRTEMP
2594 03717 4324 JMS PRSUBR
2595 03720 2002 ISZ PRTEMP
2596 03721 5311 JMP PRLOOP
2597 03722 6211 PRTXRET,CDF 10 //***** 8 K INSERT,
2598 03723 5702 JMP I PRINTXT
2599 03724 0000 PRSUBR, 0
2600 03725 0070 AND 077
2601 03726 7450 SNA
2602 03727 5322 JMP PRTXRET
2603 03732 1345 TAD 07741
2604 03731 7450 SNA
2605 03732 5340 JMP CRLFPR
2606 03733 1070 TAD 077
2607 03734 0270 AND 077
2608 03735 1051 TAD 0240
2609 03736 4433 JMS I PPUTCH
2610 03737 5724 JMP I PRSUBR
2611 03740 1027 CRLFPR, TAD 0215
2612 03741 4433 JMS I PPUTCH
2613 03742 1010 TAD 0212
2614 03743 4433 JMS I PPUTCH
2615 03744 5724 JMP I PRSUBR
2616 03745 7741 07741, 7741
2617 03746 7513 PXLINBU,LINBUF+1
2618 03747 0000 PRINUM, 0
2619 03750 7001 IAC
2620 03751 3015 DCA INDEX1
2621 03752 4362 JMS BEGFIX
2622 03753 1413 TAD I INDEX1
2623 03754 3217 DCA AC2
2624 03755 1413 TAD I INDEX1
2625 03756 3016 DCA AC3
2626 03757 4546 JMS I PANORM
2627 03760 4517 JMS I POUTNUM
2628 03761 5747 JMP I PRINUM
2629
2630
2631
2632
2633 03762 0000 BEGFIX, 0 /SETS UP FOR INTEGER TO AC MODE.
2634 03763 3017 DCA AC2 /CLEAR THEM ALL, EXCEPT FOR LOW WORD.

```



```
2635 03764 3220 DCA AC1
2636 03765 3212 DCA OV
2637 03766 3224 DCA ACS
2638 03767 1372 TAD Q233
2639 03770 3225 DCA ACE
2640 03771 5762 JMP I BEGFIX
2641
2642 03772 0233 0233, 233
2643
2644
2645 03773 0571 RESTORE, OCT+MUSTBE / (CR) OR 'A'
2646 03774 2000 2000
2647 03775 1004 TAD CODELOC
2648 03776 3246 DCA READLOC
2649 03777 5503 JMP I PEXECUTE
2650
2651
2652
2653
2654
2655
2656
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2660
2661
2662
2663
2664
2665
2666
2667
2668
2669
2670 4000 PAGE
2671
2672
2673
2674 04000 4566 MOREIN, ISIT / (CR) OR 'A'
2675 04001 2000 2000
2676 04002 5234 JMP INPLUP
2677 04003 1010 TAD Q212
2678 04004 4433 JMS I PPUTCH
2679 04005 1130 TAD OUT02
2680 04006 3131 DCA OUTDEV / GET THE OLD OUTPUT DEVICE,
2681 04007 7240 INPUT, CLA CHA / AND RESET IT.
2682 04010 1127 TAD INDEV / CHECK THE INPUT DEVICE NOW.
2683 04011 7640 SZA CLA / ARE WE INPUT FROM THE TELETYPE,
2684 04012 5224 JMP IPNOPE / NOPE.
2685 04013 1131 TAD OUTDEV / GET THE OUTPUT DEVICE.
2686 04014 4504 JMS I PPUSH / SAVE IT FOR A SECOND.
2687 04015 7201 CLA IAC / SET OUTPUT DEVICE TO TTY FOR "2"
2688 04016 3131 DCA OUTDEV
2689 04017 4541 JMS I PCOMT / WAIT FOR OUTPUT TO FINISH, THEN CONTINUE.
```

```
2690 04020 1070 TAD Q77
2691 04021 4433 JMS I PPUTCH
2692 04022 4505 JMS I PPOP / RESET OUTPUT DEVICE NOW.
2693 04023 3131 DCA OUTDEV
2694 04024 1045 IPNOPE, TAD LOCCTR
2695 04025 3565 DCA GSBPTR
2696 04026 1076 TAD PTEXT
2697 04027 4524 JMS I PGETLIN
2698 04030 1565 TAD I GSBPTR
2699 04031 3045 DCA LOCCTR
2700 04032 1037 TAD PLINBUF
2701 04033 3263 DCA INPPTR
2702 04034 4513 INPLUP, JMS I PGETVAR
2703 04035 1050 TAD WORD
2704 04036 3264 DCA INWDTMP
2705 04037 1045 TAD LOCCTR
2706 04040 3265 DCA INLCTMP
2707 04041 1263 TAD INPPTR
2708 04042 3045 DCA LOCCTR
2709 04043 4521 JMS I PEVAL
2710 04044 1045 TAD LOCCTR
2711 04045 3263 DCA INPPTR
2712 04046 1265 TAD INLCTMP
2713 04047 3045 DCA LOCCTR
2714 04050 4512 JMS I PSTOVAR
2715 04051 7332 CLA CLL CML RTR
2716 04052 1664 TAD I INWDTMP
2717 04053 7640 SZA CLA
2718 04054 5200 JMP MOREIN
2719 04055 1010 TAD Q212
2720 04056 4433 JMS I PPUTCH
2721 04057 1130 TAD OUT02 / RESET THE DEV.
2722 04060 3131 DCA OUTDEV
2723 04061 3126 DCA COLUMN
2724 04062 5503 JMP I PEXECUTE
2725 04063 0200 INPPTR, 0
2726 04064 0200 INWDTMP, 0
2727 04065 0200 INLCTMP, 0
2728 04066 0200 XGISIT, 0
2729 04067 4177 JMS GETWO
2730 04070 1266 TAD XGISIT
2731 04071 3273 DCA XISIT
2732 04072 5274 JMP XISIT+1
2733 04073 0200 XISIT, 0
2734 04074 1450 TAD I WORD
2735 04075 0201 CDF 0 / ***** 8 K INSERT.
2736 04076 1673 TAD I XISIT
2737 04077 0211 CDF 10 / ***** 8 K INSERT.
2738 04120 2273 ISZ XISIT
2739 04101 7650 SNA CLA
2740 04102 2273 ISZ XISIT
2741 04103 5673 JMP I XISIT
2742 04124 0200 ISITLIT, 0
2743 04105 1450 TAD I WORD
2744 04106 7146 CLL CHA RTL
```



```
2745 04107 7832 CML RTR
2746 04110 3024 DCA ACS
2747 04111 1024 TAO ACS
2748 04112 1168 TAO G4
2749 04113 7820 ENL CLA
2750 04114 5724 JMP I ISITLIT
2751 04115 2304 ISZ ISITLIT
2752 04116 3020 DCA AC1
2753 04117 3017 DCA AC2
2754 04120 3016 DCA AC3
2755 04121 4333 JMS ISLIT
2756 04122 3016 DCA AC3
2757 04123 4333 JMS ISLIT
2758 04124 3017 DCA AC2
2759 04125 4333 JMS ISLIT
2760 04126 3020 DCA AC1
2761 04127 4435 LOADED, FENTER
2762 04130 3016 FLD AC3
2763 04131 2020 FEXIT
2764 04132 5704 JMP I ISITLIT
2765 04133 0000 ISLIT, 2
2766 04134 2024 ISZ ACS
2767 04135 7410 SKP
2768 04136 5327 JMP LOADED
2769 04137 4177 JMS GETWD
2770 04140 1050 TAO WORD
2771 04141 5733 JMP I ISLIT
2772 04142 0000 ERROR, 0
2773 04143 4537 JMS I PRESET
2774 04144 4514 JMS I PPRINTXT /RESET ALL I/O DEVICES.
2775 04145 6531 CRLF
2776 04146 1342 TAO ERROR
2777 04147 3351 DCA .+2
2778 04150 4514 JMS I PPRINTXT
2779 04151 7402 HLT
2780 04152 4514 JMS I PPRINTXT
2781 04153 4170 QERROR
2782 04154 1452 TAO I LINENO
2783 04155 7710 SPA CLA
2784 04156 5363 JMP .+5
2785 04157 4514 JMS I PPRINTXT
2786 04160 6451 ATLINE
2787 04161 1052 TAO LINENO
2788 04162 4523 JMS I PPRINUM
2789 04163 4514 JMS I PPRINTXT
2790 04164 6531 CRLF
2791 04165 1125 TAO PPDLIST
2792 04166 3036 DCA PDL
2793 04167 5520 JMP I PEDIT
2794 04170 4000 QERROR, TEXT 'ERROR'
2795 04171 2222
2796 04172 1722
2797 04173 0000
2798
2799
```

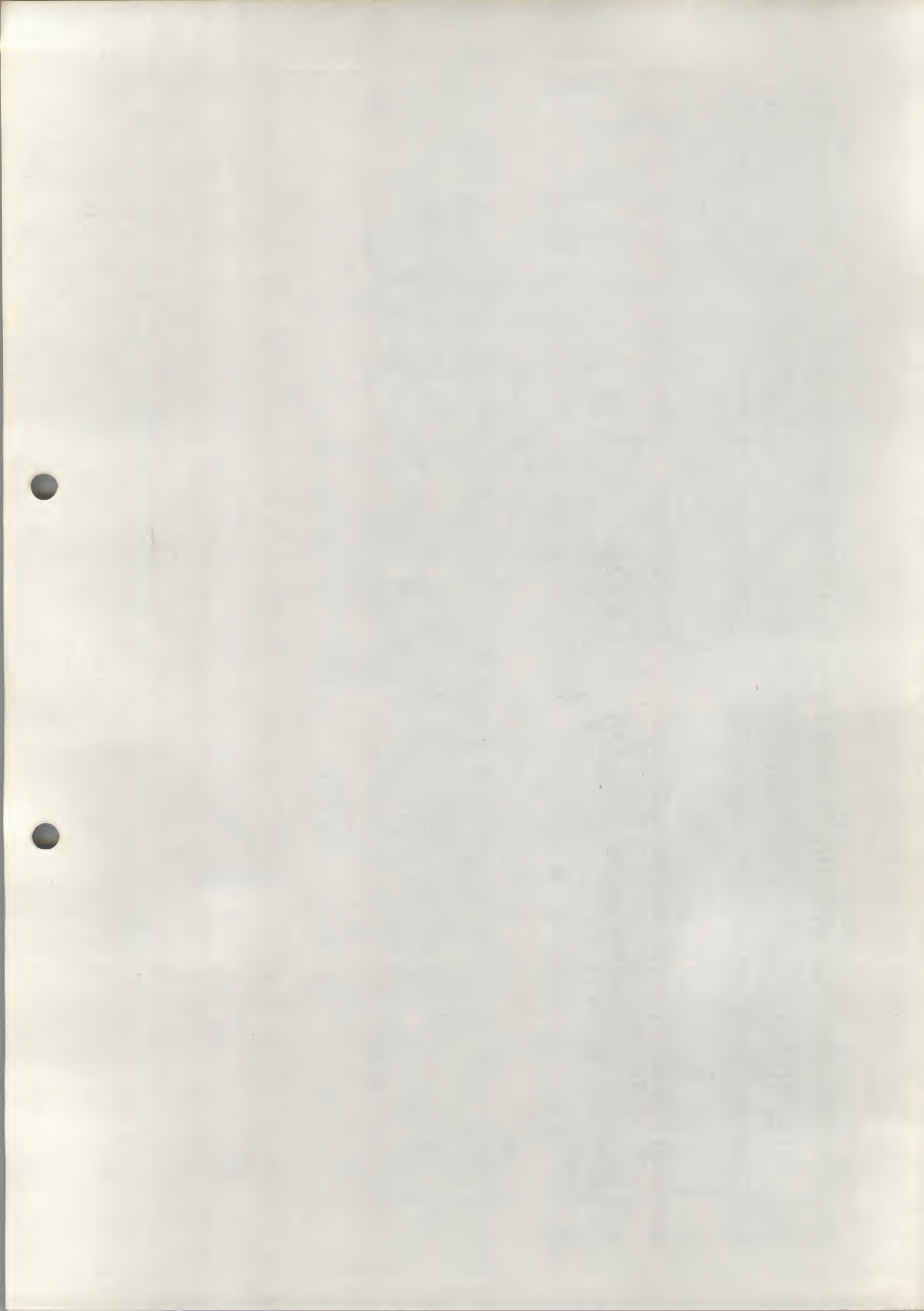
```
2800
2801
2802
2803
2804
2805 4200 PAGE
2806
2807
2808 / JMS FPT /ENTER FLOATING POINT PACK
2809 / 0000 /FEXIT
2810 / 0040 /FSNE
2811 / 0050 /FSEQ
2812 / 0100 /FSGE
2813 / 0110 /FSLT
2814 / 0140 /FSGT
2815 / 0150 /FSLE
2816 / IF BIT 4 OFF THEN SAME AS PDP-8
2817 / IF BIT 4 ON THEN IF BIT 3 OFF THEN RELATIVE PLUS
2818 / IF BIT 3 ON THEN RELATIVE MINUS
2819 /
2820 / 1XXX /FJMP
2821 / 2XXX /FST
2822 / 3XXX /FLD
2823 / 4XXX /FAO
2824 / 5XXX /FSB
2825 / 6XXX /FMP
2826 / 7XXX /FDV
2826 04200 0000 FPT, 0
2827 04201 5204 JMP .+3
2828 04202 4546 FPLOOP, JMS I PANORM
2829 04203 2200 ISZ FPT
2830 04204 6201 COF 0
2831 04205 1600 TAO I FPT
2832 04206 7000 RTL
2833 04207 7000 RTL
2834 04210 0072 AND 07
2835 04211 7450 SNA
2836 04212 5305 JMP FPROPER
2837 04213 3273 DCA FPGOTO
2838 04214 1600 TAO I FPT
2839 04215 2155 AND 0200
2840 04216 7450 SNA CLA
2841 04217 5227 JMP FPPGZ
2842 04220 1600 TAO I FPT
2843 04221 0027 AND 0177
2844 04222 7430 SZL
2845 04223 7041 CIA
2846 04224 1200 TAO FPT
2847 04225 3324 DCA FPADDR
2848 04226 5237 JMP FPDIT
2849 04227 1600 FPPGZ, TAO I FPT
2850 04230 0027 AND 0177
2851 04231 3304 DCA FPADDR
2852 04232 7420 SZL
2853 04233 5237 JMP FPDIT
2854 04234 1704 TAO I FPADDR
2855
```


2855	04235	3304	OCA	FPADDR	
2856	04236	6211	COF	10	***** 8 K INSERT.
2857	04237	7346	FPDOIT, CLA	CLL CMA RTL	
2858	04240	1273	TAD	FPGOTO	
2859	04241	7710	SPA	CLA	
2860	04242	5270	JMP	FPNOADR	
2861	04243	7330	CLA	CLL CML RAR	
2862	04244	2704	AND	I FPADDR	
2863	04245	3226	OCA	OPS	
2864	04246	1724	TAD	I FPADDR	
2865	04247	7408	SZA	CLA	
2866	04250	7040	CMA		
2867	04251	3156	OCA	FPFLAG	
2868	04252	1724	TAD	I FPADDR	
2869	04253	7012	RTR		
2870	04254	7012	RAR		
2871	04255	0271	AND	Q377	
2872	04256	3232	OCA	OPE	
2873	04257	1704	TAD	I FPADDR	
2874	04260	0272	AND	Q7	
2875	04261	3223	OCA	QPI	
2876	04262	2304	ISZ	FPADDR	
2877	04263	1704	TAD	I FPADDR	
2878	04264	3222	OCA	OP2	
2879	04265	2304	ISZ	FPADDR	
2880	04266	1704	TAD	I FPADDR	
2881	04267	3221	OCA	OP3	
2882	04270	1273	FPNOADR, TAD	FPGOTO	
2883	04271	1274	TAD	FPJUMP	
2884	04272	3273	OCA	.*1	
2885	04273	7402	FPGOTO, HLT		
2886	04274	5674	FPJUMP, JMP	I	
2887	04275	4317	FPJMP		
2888	04276	4322	FPSTO		
2889	04277	4351	FPLAC		
2890	04300	4456	FPADD		
2891	04301	4453	FPSUB		
2892	04302	4530	FPML		
2893	04303	4667	FPDIV		
2894	04304	0200	FPADDR, 0		
2895	04305	1600	FPOPER, TAD	I FPT	
2896	04306	6211	COF	10	***** 8 K INSERT.
2897	04307	7452	SNA		
2898	04310	5600	JMP	I FPT	
2899	04311	1305	TAD	07600	
2900	04312	3314	OCA	FPSKIP	
2901	04313	4333	JMS	HIGHWD	
2902	04314	7402	FPSKIP, HLT		
2903	04315	2202	ISZ	FPT	
2904	04316	5204	JMP	FPLOOP+1	
2905	04317	1304	FPJMP, TAD	FPADDR	
2906	04320	3202	OCA	FPT	
2907	04321	5204	JMP	FPLOOP+2	
2908	04322	4333	FPSTO, JMS	HIGHWD	
2909	04323	3704	OCA	I FPADDR	

2910	04324	2304	ISZ	FPADDR	
2911	04325	1217	TAD	AC2	
2912	04326	3704	OCA	I FPADDR	
2913	04327	2304	ISZ	FPADDR	
2914	04332	1016	TAD	AC3	
2915	04331	3704	OCA	I FPADDR	
2916	04332	5203	JMP	FPLOOP+1	
2917	04333	0200	HIGHWD, 0		
2918	04334	1025	TAD	ACE	
2919	04335	7104	CLL	RAL	
2920	04336	7502	SMA		

2921	04337	7106	CLL	RTL
2922	04340	7330	SPA	SZL
2923	04341	5346	JMP	07600
2924	04342	1024	TAD	ACS
2925	04343	1020	TAD	AC1
2926	04344	5733	JMP	I HIGHWD
2927	04345	7602	07622,	7602
2928	04346	1071	TAD	0317
2929	04347	3025	DCA	ACE
2930	04350	5134	JMP	HIGHWD+1
2931	04351	1006	FPLAC,	TAD OPS
2932	04352	3024	DCA	ACS
2933	04353	1132	TAD	CPE
2934	04354	5025	DCA	ACE
2935	04355	1023	TAD	OP1
2936	04356	3020	DCA	AC1
2937	04357	1022	TAD	OP2
2938	04360	3017	DCA	AC2
2939	04361	1021	TAD	OP3
2940	04362	1016	DCA	AC3
2941	04363	3012	DCA	OV
2942	04364	5222	JMP	FPLCCP
2943	04365	7041	UPARR2,	CIA
2944	04366	3013	DCA	INDEX1
2945	04367	4035	FENTER	
2946	04370	3151	FLO	ONE
2947	04371	0202	FEKIT	
2948	04372	5376	JMP	.+4
2949	04373	4035	FENTER	
2950	04374	6073	FMP	OPERAND
2951	04375	2200	FEKIT	
2952	04376	2213	ISZ	INDEX1
2953	04377	5373	JMP	.+4
2954	04400	5601	JMP	I .+1
2955	04401	1203	OPDOONE	
2956				
2957				
2958				
2959				
2960				
2961	04402	0000	AR1,	0
2962	04403	1020	TAD	AC1
2963	04404	7110	CLL	RAR
2964	04405	3020	DCA	AC1
2965	04406	1017	TAD	AC2
2966	04407	7010	RAR	
2967	04410	3017	DCA	AC2
2968	04411	1016	TAD	AC3
2969	04412	7010	RAR	
2970	04413	3016	DCA	AC3
2971	04414	7010	RAR	
2972	04415	3012	DCA	OV
2973	04416	5402	JMP	I AR1
2974	04417	2000	ACN,	0
2975	04420	1234	TAD	POP3

2976	04421	3235	DCA	QADD
2977	04422	7346	CLA	CLL CMA RTL
2978	04423	3222	DCA	AR1
2979	04424	7024	CML	RAL
2980	04425	1635	TAD	I QADD
2981	04426	7041	CIA	
2982	04427	3635	DCA	I QADD
2983	04430	2235	ISZ	QADD
2984	04431	2202	ISZ	AR1
2985	04432	5224	JMP	.+6
2986	04433	5617	JMP	I ACN
2987	04434	0021	POP3,	OP3
2988	04435	0000	QADD,	0
2989	04436	7100	CLL	
2990	04437	1016	TAD	AC3
2991	04440	1021	TAD	OP3
2992	04441	3016	DCA	AC3
2993	04442	7004	RAL	
2994	04443	1017	TAD	AC2
2995	04444	1022	TAD	OP2
2996	04445	3017	DCA	AC2
2997	04446	7004	RAL	
2998	04447	1220	TAD	AC1
2999	04450	1223	TAD	OP1
3000	04451	3022	DCA	AC1
3001	04452	5635	JMP	I QADD
3002	04453	7330	FPSUB,	CLA CLL CML RAR
3003	04454	1026	TAD	OPS
3004	04455	3026	DCA	OPS
3005	04456	2156	FPADD,	ISZ FPFLAG
3006	04457	5326	JMP	EOFAD
3007	04460	1025	TAD	ACE
3008	04461	7141	CLL	CIA
3009	04462	1030	TAD	OPE
3010	04463	7430	SZL	
3011	04464	5302	JMP	BCKWDS
3012	04465	3235	DCA	QADD
3013	04466	1023	ALGNLP,	TAD OP1
3014	04467	7110	CLL	RAR
3015	04472	3023	DCA	OP1
3016	04471	1022	TAD	OP2
3017	04472	7010	RAR	
3018	04473	3022	DCA	OP2
3019	04474	1021	TAD	OP3
3020	04475	7210	RAR	
3021	04476	3021	DCA	OP3
3022	04477	2235	ISZ	QADD
3023	04500	5266	JMP	ALGNLP
3024	04501	5312	JMP	SETSGN
3025	04502	7042	BCKWDS,	CMA
3026	04503	3235	DCA	QADD
3027	04504	1030	TAD	OPE
3028	04505	3025	DCA	ACE
3029	04506	7410	SKP	
3030	04507	4202	JMS	AR1




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3031 04510 2255 ISZ OADD
3032 04511 5307 JMP .+2
3033 04512 1024 SETSGN, TAD ACS
3034 04513 1025 TAD OPS
3035 04514 7710 SPA CLA
3036 04515 4217 JMS ACN
3037 04516 4235 JMS OADD
3038 04517 1020 TAD AC1
3039 04520 7703 SNA CLA
3040 04521 5306 JMP EOFAD
3041 04522 7366 CLA CLL CMA RTL
3042 04523 4217 JMS ACN
3043 04524 1025 TAD OPS
3044 04525 3024 DCA ACS
3045 04526 3012 EOFAD, DCA OV
3046 04527 5775 JMP I PFLOOP
3047 04530 2156 FMUL, ISZ PFFLAG
3048 04531 5371 JMP MULCLR
3049 04532 1024 TAD ACS
3050 04533 1025 TAD OPS
3051 04534 3024 DCA ACS
3052 04535 1025 TAD ACE
3053 04536 1010 TAD OPE
3054 04537 1377 TAD O7577
3055 04540 3025 DCA ACE
3056 04541 1020 TAD AC1
3057 04542 3025 DCA OPS
3058 04543 1017 TAD AC2
3059 04544 3030 DCA OPE
3060 04545 1016 TAD AC3
3061 04546 3031 DCA TMP
3062 04547 3020 DCA AC1
3063 04550 1162 TAD O7745
3064 04551 3376 DCA FPTMP
3065 04552 4202 MPYLUP, JMS AR1
3066 04553 1025 TAD OPS
3067 04554 7010 RAR
3068 04555 3026 DCA OPS
3069 04556 1030 TAD OPE
3070 04557 7010 RAR
3071 04560 3230 DCA OPE
3072 04561 1031 TAD TMP
3073 04562 7010 RAR
3074 04563 3231 DCA TMP
3075 04564 7430 SZL
3076 04565 4235 JMS OADD
3077 04566 2376 ISZ FPTMP
3078 04567 5352 JMP MPYLUP
3079 04570 5775 JMP I PFLOOP
3080 04571 7346 MULCLR, CLA CLL CMA RTL
3081 04572 3025 DCA ACE
3082 04573 3020 DCA AC1
3083 04574 5775 JMP I PFLOOP
3084 04575 4202 PFLOOP, PFLOOP
3085 04576 0002 FPTMP, 0
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3086 04577 7577 O7577, 7577
3087
3088
3089
3090
3091
3092
3093
3094 4600 PAGE
3095
3096
3097
3098 04600 0000 ANORM, 0
3099 04601 1020 TAD AC1
3100 04602 7450 SNA
3101 04603 5212 JMP MAYZERO /IS HIGH WORD ZERO?
3102 04604 1055 TAD O7770 /YEP, ENTIRE NUMBER MAY BE ZERO.
3103 04605 7710 SPA CLA
3104 04606 5220 JMP NOTBIG
3105 04607 4547 JMS I PAR1
3106 04610 2025 ISZ ACE
3107 04611 5201 JMP ANORM+1
3108
3109 04612 1017 MAYZERO, TAD AC2 /IS SECOND WORD ZERO?
3110 04613 7640 SZL CLA
3111 04614 5220 JMP NOTBIG /NOPE, NORMAL NORMALIZE.
3112 04615 1016 TAD AC3 /1 & 2 ARE ZERO, IS THIRD WORD?
3113 04616 7650 SNA CLA
3114 04617 5245 JMP UNDERF /YEP, CLEAR AC, ALL ZERO.
3115
3116 04620 1212 NOTBIG, TAD OV
3117 04621 7650 SNA CLA
3118 04622 5233 JMP NOBUMP
3119 04623 2016 ISZ AC3
3120 04624 5233 JMP NOBUMP
3121 04625 2017 ISZ AC2
3122 04626 5233 JMP NOBUMP
3123 04627 2020 ISZ AC1
3124 04630 3012 DCA OV
3125 04631 5201 JMP ANORM+1
3126 04632 7240 CLA CMA
3127 04633 1025 NOBUMP, TAD ACE
3128 04634 7510 SPA
3129 04635 5245 JMP UNDERF
3130 04636 3025 DCA ACE
3131 04637 7346 CLA CLL CMA RTL
3132 04640 1020 TAD AC1
3133 04641 7740 SNA SZL CLA
3134 04642 5600 JMP I ANORM
3135 04643 4254 JMS AL1
3136 04644 5232 JMP NOBUMP-1
3137 04645 7203 UNDERF, CLA
3138 04646 3024 DCA ACS
3139 04647 3025 DCA ACE
3140 04650 3020 DCA AC1
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3141 24451 3217 DCA AC2
3142 24452 3218 DCA AC3
3143 24453 5600 JMP I ANORM
3144 24454 6880 AL1, 0
3145 24455 1216 TAD AC3
3146 24456 7104 CLL RAL
3147 24457 3216 DCA AC3
3148 24458 1217 TAD AC2
3149 24459 7224 RAL
3150 24460 3217 DCA AC2
3151 24461 1020 TAD AC1
3152 24462 7224 RAL
3153 24463 3220 DCA AC1
3154 24464 5654 JMP I AL1
3155 24465 6201 FPDIV, CDF 0
3156 24466 2156 ISZ PPFLAG
3157 24467 5336 JMP PPZDIV
3158 24468 1024 TAD ACS
3159 24469 1226 TAD OPS
3160 24470 3024 DCA ACS
3161 24471 1230 TAD OPE
3162 24472 7241 CIA
3163 24473 1025 TAD ACE
3164 24474 1227 TAD O177
3165 24475 3225 DCA ACE
3166 24476 3031 DCA TMP
3167 24477 1343 TAD O7743
3168 24478 3200 DCA ANORM
3169 24479 7338 DIVLP, CLA CLL CML RAR
3170 24480 6023 AND OP1
3171 24481 1020 TAD AC1
3172 24482 7720 SMA CLA
3173 24483 4742 JMS I PACN
3174 24484 4557 JMS I POADO
3175 24485 1031 TAD TMP
3176 24486 7024 RAL
3177 24487 3031 DCA TMP
3178 24488 1030 TAD OPE
3179 24489 7024 RAL
3180 24490 3030 DCA OPE
3181 24491 1026 TAD OPS
3182 24492 7024 RAL
3183 24493 3026 DCA OPS
3184 24494 4550 JMS I PAL1
3185 24495 2200 ISZ ANORM
3186 24496 5305 JMP DIVLP
3187 24497 1026 TAD OPS
3188 24498 3220 DCA AC1
3189 24499 1030 TAD OPE
3190 24500 3017 DCA AC2
3191 24501 1031 TAD TMP
3192 24502 3016 DCA AC3
3193 24503 5741 JMP I PPFL00P
3194 24504 1071 FPDIV, TAD O377
3195 24505 3025 DCA ACE

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/***** 8 K INSERT.

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3196 24740 5741 JMP I PPFL00P
3197 24741 4202 PPFL00P, PPFL00P
3198 24742 4417 PACN, ACN
3199 24743 7743 O7743, 7743
3200 24744 0000 FIX, 0
3201 24745 1020 TAD AC1
3202 24746 7650 SMA CLA
3203 24747 5367 JMP ZFIXEX
3204 24748 1025 FIXLUP, TAD ACE
3205 24749 1377 TAD O7545
3206 24750 7720 SMA CLA
3207 24751 5373 JMP FIXEXIT
3208 24752 4547 JMS I PAR1
3209 24753 1024 TAD ACS
3210 24754 0212 AND OV
3211 24755 7640 SZA CLA
3212 24756 2016 ISZ AC3
3213 24757 5365 JMP ,+4
3214 24758 2017 ISZ AC2
3215 24759 5365 JMP ,+2
3216 24760 2020 ISZ AC1
3217 24761 2025 ISZ ACE
3218 24762 5350 JMP FIXLUP
3219 24763 3025 ZFIXEX, DCA ACE
3220 24764 3020 DCA AC1
3221 24765 3017 DCA AC2
3222 24766 3016 DCA AC3
3223 24767 3012 FIXEXIT, DCA OV
3224 24768 1216 TAD AC3
3225 24769 7001 SSFIX, IAC
3226 24770 5744 JMP I FIX
3227 24771 7545 O7545, 7545
3228
3229
3230
3231
3232
3233
3234
3235 5000 PAGE
3236
3237
3238
3239 05000 0000 OUTNUM, 0
3240 05001 6201 CDF 0
3241 05002 1024 TAD ACS
3242 05003 7720 SMA CLA
3243 05004 5207 JMP ,+3
3244 05005 1351 TAD O255
3245 05006 4433 JMS I PPATCH
3246 05007 1020 TAD AC1
3247 05008 7640 SZA CLA
3248 05009 5216 JMP NONZERO
3249 05010 1011 TAD O260
3250 05011 4433 JMS I PPATCH

```

/***** 8 K INSERT.

/(NOP) IF 1 ORG INDEXING


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3251 05014 6211 CDF 12
3252 05015 5400 JMP I OUTNUM
3253 05016 4700 NONZERO, JMS I FIXUP
3254 05017 1355 TAD 07771
3255 05020 3042 DCA PRTEMP
3256 05021 1044 TAD PNMBUF
3257 05022 3225 DCA ACE
3258 05023 5230 JMP .+5
3259 05024 1022 CVTLOOP, TAD AC1
3260 05025 0227 AND 0177
3261 05026 3220 DCA AC1
3262 05027 4700 JMS I P-PPY
3263 05030 1020 TAD AC1
3264 05031 7200 RTL
3265 05032 7200 RTL
3266 05033 7200 RTL
3267 05034 2347 AND 017
3268 05035 1011 TAD 0260
3269 05036 3425 DCA I ACE
3270 05037 2225 ISZ ACE
3271 05040 2042 ISZ PRTEMP
3272 05041 5224 JMP CVTLOOP
3273 05042 7326 CLA CLL CML RTL
3274 05043 1043 TAD DECEXP
3275 05044 7450 SNA
3276 05045 5325 JMP FMT1 /,0NNNNNNN
3277 05046 7510 SPA
3278 05047 5253 JMP FMT2 /N,NNNNNE+NN
3279 05050 1055 TAD 07770
3280 05051 7710 SPA CLA
3281 05052 5330 JMP FMT3 /OTHER THAN N,NNNNNE+NN
3282 05053 7200 FMT2, CLA /N,NNNNNE+NN
3283 05054 1044 TAD PNMBUF
3284 05055 3225 DCA ACE
3285 05056 1357 TAD 07772
3286 05057 3242 DCA PRTEMP
3287 05060 1425 TAD I ACE
3288 05061 4433 JMS I PPUTCH
3289 05062 1356 TAD 0256A
3290 05063 4433 JMS I PPUTCH
3291 05064 2225 ISZ ACE
3292 05065 1425 TAD I ACE
3293 05066 4433 JMS I PPUTCH
3294 05067 2042 ISZ PRTEMP
3295 05070 5264 JMP .+4
3296 05071 1352 TAD 0305
3297 05072 4433 JMS I PPUTCH
3298 05073 1043 TAD DECEXP
3299 05074 7710 SPA CLA
3300 05075 7326 CLA CLL CML RTL
3301 05076 1350 TAD 0253
3302 05077 4433 JMS I PPUTCH
3303 05100 3025 DCA ACE
3304 05101 1043 TAD DECEXP
3305 05102 7510 SPA

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3306 05103 7041 CIA
3307 05104 3043 DCA DECEXP
3308 05105 1043 TAD DECEXP

```




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3309 05106 1354 TAD 07766
3310 05107 7510 SPA
3311 05110 5314 JMP ,+4
3312 05111 3243 DCA DECEXP
3313 05112 2025 ISZ ACE
3314 05115 5305 JMP ,+6
3315 05114 7200 CLA
3316 05115 1025 TAD
3317 05116 1211 TAD ACE
3318 05117 4433 JMS I 0262
3319 05123 1043 TAD PRUTCH
3320 05124 1211 TAD DECEXP
3321 05125 1211 TAD 0260
3322 05126 4433 JMS I PRUTCH
3323 05127 6211 FMTENT, EDF 12
3324 05128 0400 FMT1, JMS I 02TNUM
3325 05129 5314 FMT1, JMS I PPRINTXT
3326 05126 7371 DOTZERO
3327 05127 6201 EDF 3
3328 05137 1345 FMT3, TAD 07771
3329 05131 3042 DCA PRTEMP
3330 05132 1341 TAD PMSF6
3331 05133 3225 TRYAGIN, DCA ACE
3332 05134 1425 TAD I ACE
3333 05135 1353 TAD 07520
3334 05136 7440 SZA CLA
3335 05137 5344 JMP ZERDONE
3336 05140 2042 ISZ PRTEMP
3337 05141 7240 CLA CMA
3338 05142 1025 TAD ACE
3339 05143 5333 JMP TRYAGIN
3340 05144 5745 ZERDONE, JMP I ,+1
3341 05145 6545 PZERDONE
3342 05146 5200 FIXUP, FIXITUP
3343 05147 0317 017, 17
3344 05150 0253 0253, 253
3345 05151 0255 0255, 255
3346 05152 0305 0305, 305
3347 05153 7520 07520, 7520
3348 05154 7766 07766, 7766
3349 05155 7771 07771, 7771
3350 05156 0256 0256A, 256
3351 05157 7772 07772, 7772
3352 05160 5321 PMPY, MPY
3353 05161 5343 PMSF6, NUMBUF+6
3354
3355 05162 3714 TOOLONG,TEXT 'LINE TOO LONG'
3356 05163 1116
3357 05164 0500
3358 05165 2417
3359 05166 1740
3360 05167 1417
3361 05170 1607
3362 05171 3720
3363
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////////// 8 K INSERT.

////////// 8 K INSERT.

////////// 8 K INSERT.

////////// 8 K INSERT.

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3364
3365
3366
3367
3368
3369
3370 5200 PAGE
3371
3372
3373 05200 0200 FIXITUP,0
3374 05201 1025 TAD ACE
3375 05202 1345 TAD 07610
3376 05203 3025 DCA ACE
3377 05204 7410 SKP
3378 05205 1043 OCC, TAD DECEXP
3379 05206 3043 OCA DECEXP
3380 05207 1020 NORMIT, TAD AC1
3381 05210 7200 RTL
3382 05211 7632 SZL CLA
3383 05212 5220 JMP NORMED
3384 05213 4550 JMS I PAL1
3385 05214 7240 CLA CMA
3386 05215 1025 TAD ACE
3387 05216 3225 DCA ACE
3388 05217 5207 JMP NORMIT
3389 05220 1025 NORMED, TAD ACE
3390 05221 7540 SZA SZA
3391 05222 5236 JMP NOTX10
3392 05223 7200 CLA
3393 05224 4547 JMS I PAR1
3394 05225 4547 JMS I PAR1
3395 05226 4547 JMS I PAR1
3396 05227 4547 JMS I PAR1
3397 05230 4321 JMS MPY
3398 05231 1025 TAD ACE
3399 05232 1160 TAD 04
3400 05233 3025 OCA ACE
3401 05234 7240 CLA CMA
3402 05235 5205 JMP OCC
3403 05236 1346 NOTX10, TAD 07773
3404 05237 7510 SPA
3405 05242 5265 JMP EXPOK
3406 05241 7200 CLA
3407 05242 1054 EXPGOOD, TAD 07740
3408 05243 3321 DCA MPY
3409 05244 7100 CLL
3410 05245 1020 DVLOOP, TAD AC1
3411 05246 1347 TAD 05400
3412 05247 7500 SZA
3413 05250 3020 OCA AC1
3414 05251 7264 CLA CML CMA RAL
3415 05252 3023 DCA CP1
3416 05253 4550 JMS I PAL1
3417 05254 2023 ISZ CP1
3418 05255 2016 ISZ AC3
```


3419	05256	2321	ISZ	MPY
3420	05257	5245	JMP	DVLOOP
3421	05260	1020	TAD	AC1
3422	05261	0071	AND	0377
3423	05262	1020	DCA	AC1
3424	05263	7221	CLA	IAC
3425	05264	5225	JMP	OCC
3426	05265	3242	EXPOK, DCA	PRTEMP
3427	05266	7410	SKP	
3428	05267	4547	JMS I	PAR1
3429	05270	2702	ISZ	PRTEMP
3430	05271	5267	JMP	.-2
3431	05272	1200	TAD	AC1
3432	05273	1347	TAD	05400
3433	05274	7720	SMA	CLA
3434	05275	5242	JMP	EXPGOOD
3435	05276	7300	CLA	CLL
3436	05277	1016	TAD	AC3
3437	05300	1344	TAD	02002
3438	05301	3016	DCA	AC3
3439	05302	7430	SZL	
3440	05303	2017	ISZ	AC2
3441	05304	7410	SKP	
3442	05305	2020	ISZ	AC1
3443	05306	1220	TAD	AC1
3444	05307	1347	TAD	05400
3445	05310	7440	SZA	CLA
3446	05311	5600	JMP I	FIXITUP
3447	05312	1155	TAD	0200
3448	05313	3020	DCA	AC1
3449	05314	3017	DCA	AC2
3450	05315	3016	DCA	AC3
3451	05316	2243	ISZ	DECEXP
3452	05317	7000	NOP	
3453	05320	5600	JMP I	FIXITUP
3454	05321	0000	HPY, 0	
3455	05322	4550	JMS I	PAL1
3456	05323	1020	TAD	AC1
3457	05324	3023	DCA	OP1
3458	05325	1017	TAD	AC2
3459	05326	3022	DCA	OP2
3460	05327	1016	TAD	AC3
3461	05330	3021	DCA	OP3
3462	05331	4550	JMS I	PAL1
3463	05332	4550	JMS I	PAL1
3464	05333	4557	JMS I	POADD
3465	05334	5721	JMP I	HPY
3466	05335	0000	NUMBUF, 01010101010	
3467	05336	0000		
3468	05337	0000		
3469	05340	0000		
3470	05341	0000		
3471	05342	0000		
3472	05343	0000		
3473	05344	2062	02062, 2062	

3474	05345	7610	07610, 7610
3475	05346	7773	07773, 7773
3476	05347	5400	05400, 5400
3477			
3478			
3479			
3480			
3481			
3482			
3483	05350	0000	RNDJMP, FEXIT
3484	05351	4546	JMS I
3485	05352	5753	JMP I
3486			PANORM
3487	05353	0000	RND, 0
3488	05354	4435	FENTER
3489	05355	3227	FLD+FWD+FRNDX=.
3490	05356	0000	FEXIT
3491	05357	1221	TAD
3492	05360	7000	RTL
3493	05361	7000	RTL
3494	05362	7000	RTL
3495	05363	3220	DCA
3496	05364	1020	TAD
3497	05365	7010	RAR
3498	05366	0054	AND
3499	05367	3017	DCA
3500	05370	3016	DCA
3501	05371	4557	JMS I
3502	05372	4557	JMS I
3503	05373	4557	JMS I
3504	05374	1030	TAD
3505	05375	3025	DCA
3506	05376	1020	TAD
3507	05377	0072	AND
3508	05400	3020	DCA
3509	05401	4435	FENTER
3510	05402	2202	FST+FWD+FRNDX=.
3511	05403	1633	FJMP+BAWD=,RNDJMP
3512			
3513			
3514	05404	2204	FRNDX, 2004/4173/1231
3515	05405	4173	
3516	05406	1231	
3517			
3518			
3519			
3520			
3521	05407	0000	FSQRX, 01010
3522	05410	0000	
3523	05411	0000	
3524	05412	0000	.SOR, 0
3525	05413	4435	FENTER
3526	05414	2273	FST
3527	05415	0040	FSNE
3528	05416	1232	FJMP+FWD+SGEXIT=.



```

3529 05417 0000 FEXIT
3530 05420 1024 TAD ACS
3531 05421 7710 SPA CLA
3532 05422 5447 JMP I PARGERR
3533 05423 1025 TAD ACE
3534 05424 1252 TAD 007600
3535 05425 7100 CLL
3536 05426 7510 SPA
3537 05427 7220 CML
3538 05430 7310 RAR
3539 05431 1155 TAD 0220
3540 05432 3225 DCA ACE
3541 05433 1055 TAD 07770
3542 05434 3213 DCA INDEX1
3543 05435 0035 SQLOOP, FENTER
3544 05436 2527 FST+BXWD+,-FSQRX
3545 05437 3273 FLD OPERAND
3546 05440 7631 FQV+BXWD+,-FSQRX
3547 05441 4632 FAD+BXWD+,-FSQRX
3548 05442 0000 FEXIT
3549 05443 7200 CLA CMA
3550 05444 1025 TAD ACE
3551 05445 3225 DCA ACE
3552 05446 2013 ISZ INDEX1
3553 05447 5235 JMP SQLOOP
3554 05450 0000 SQEXIT, FEXIT
3555 05451 5612 JMP I SQR
3556 05452 7600 007600, 7600
3557 05453 0000 FN, 0
3558 05454 1045 TAD LOCCTR
3559 05455 4524 JMS I PPUSH
3560 05456 1050 TAD WORD
3561 05457 4524 JMS I PPUSH
3562 05460 6201 CDF 0
3563 05461 1745 TAD I PUSERFN
3564 05462 6211 CDF 10
3565 05463 7021 IAC
3566 05464 3045 DCA LOCCTR
3567 05465 4567 GET+ISIT /*DEF*/
3568 05466 1761 1761
3569 05467 5746 JMP I PFNERR /NO
3570 05470 4177 JMS GETWD /SKIP 'FN'
3571 05471 4177 JMS GETWD /SKIP LETTER
3572 05472 4177 JMS GETWD /SKIP '('
3573 05473 4567 GET+ISIT /A VARIABLE
3574 05474 7000 7000
3575 05475 5746 JMP I PFNERR /NO
3576 05476 2050 ISZ WORD
3577 05477 1450 TAD I WORD
3578 05500 3213 DCA INDEX1
3579 05501 1413 TAD I INDEX1
3580 05502 4504 JMS I PPUSH
3581 05503 1413 TAD I INDEX1
3582 05504 4504 JMS I PPUSH
3583 05505 1413 TAD I INDEX1

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/***** 8 K INSERT

/***** 8 K INSERT.

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3584 05506 4504 JMS I PPUSH
3585 05507 1013 TAD INDEX1
3586 05510 4504 JMS I PPUSH
3587 05511 7344 CLA CLL CMA RAL
3588 05512 1013 TAD INDEX1
3589 05513 3213 DCA INDEX1
3590 05514 4435 FENTER
3591 05515 2413 FSTI INDEX1
3592 05516 0000 FEXIT
3593 05517 4177 JMS GETWD /SKIP ')'
3594 05520 4177 JMS GETWD /SKIP '='
3595 05521 4501 JMS I PEVAL
3596 05522 4505 JMS I PPOP
3597 05523 3250 DCA WORD
3598 05524 4505 JMS I PPOP
3599 05525 3450 DCA I WORD
3600 05526 7240 CLA CMA
3601 05527 1050 TAD WORD
3602 05530 3050 DCA WORD
3603 05531 4505 JMS I PPOP
3604 05532 3450 DCA I WORD
3605 05533 7240 CLA CMA
3606 05534 1050 TAD WORD
3607 05535 3050 DCA WORD
3608 05536 4505 JMS I PPOP
3609 05537 3450 DCA I WORD
3610 05540 4505 JMS I PPOP
3611 05541 3250 DCA WORD
3612 05542 4505 JMS I PPOP
3613 05543 3045 DCA LOCCTR
3614 05544 5653 JMP I FN
3615 05545 1620 PUSERFN,USERFN
3616
3617
3618
3619 05546 0352 PFNERR, FNERR
3620
3621
3622
3623
3624
3625
3626
3627
3628 05547 0200 TAB, 0
3629 05550 4506 JMS I PFI
3630 05551 6201 CDF 0
3631 05552 7201 CLA IAC
3632 05553 3771 DCA I PTABFLG
3633 05554 1024 TAD ACS
3634 05555 7650 SNA CLA
3635 05556 1016 TAD ACS
3636 05557 0071 AND 0377
3637 05560 3770 DCA I PTABDES
3638 05561 4772 JMS I TBEGFIX

```

/FUNCTION "TAB" IN PRINT STATEMENT.

/FIX THE FAC NOW.

/SET DATA FIELD TO FIELD ZERO.

/SET FLAG TO INDICATE WE'VE DONE THIS FUNCTION.

/AND STORE AWAY.

/GET SIGN OF FAC

/WAS IT A POSITIVE NUMBER?

/YEP, PICK UP DESIRED POSITION.

/MAXIMUM OF 256 COLUMNS.

/SAVE AWAY FOR ACTUAL SPACER TO USE.

/PREPARE TO RETURN PRESENT COLUMN NUMBER.

3639	05562	7201	CLA	IAC		
3640	05563	1126	TAD		COLUMN	
3641	05564	3216	DCA		ACS	/INCREMENT TO ACCOUNT FOR DIFFERENCES.
3642	05565	6211	CDF		12	/AND STORE AWAY.
3643	05566	0546	JMS	I	PANORM	/RESET DATA FIELD NOW.
3644	05567	5747	JMP	I	TAB	/NORMALIZE AC NOW.
3645						/AND RETURN NOW.
3646						
3647	05570	6367	PTABDES,	TABDES		/POINTER TO DESIRED LOCATION OF PRINT HEAD.
3648	05571	2345	PTABFLG,	TABFLG		/POINTER TO TAB IN PRINT FLAG.
3649	05572	3742	TREGFIX,	BEGFIX		/POINTER TO MINI-FIX-SET-UP ROUTINE.
3650						
3651						
3652						
3653						
3654						
3655						
3656						
3657						
3658	05573	7201	RUBO,	CLA	IAC	/SET RUBOUT SWITCH.
3659	05574	3135	NORURD,	OCA	RBSWCH	
3660	05575	5776	JMP	I	..1	/AND CLEAN IT UP.
3661	05576	7175	DEVCOM			/CLEAN-UP POINTER.
3662						
3663						
3664						
3665						
3666						
3667						
3668						
3669						
3670						
3671						
3672		5600			PAGE	
3673						
3674						
3675						
3676						
3677						
3678	05600	0000	TAN,	0		
3679	05601	4435	FENTER			
3680	05602	2275	FST+FWD+FTANT1=.			
3681	05603	0000	FEXIT			
3682	05604	4216	JMS	COS		
3683	05605	4435	FENTER			
3684	05606	2274	FST+FWD+FTANT2=.			
3685	05607	3270	FLO+FWD+FTANT1=.			
3686	05610	0000	FEXIT			
3687	05611	4224	JMS	SIN		
3688	05612	4435	FENTER			

3689	05613	7267	FDV+FWD+FTANT2=.		
3690	05614	0000	FEXIT		
3691	05615	5600	JMP	I	TAN
3692	05616	0000	COS,	0	
3693	05617	4435	FENTER		
3694	05620	4312	FAD+FWD+FSINC7=.		
3695	05621	0000	FEXIT		
3696	05622	4224	JMS	SIN	
3697	05623	5616	JMP	I	COS
3698	05624	0000	SIN,	0	
3699	05625	4435	FENTER		
3700	05626	7265	FDV+FWD+FSINC1=.		
3701	05627	2256	FST+FWD+FSINC7=.		
3702	05630	0000	FEXIT		
3703	05631	3024	DCA		ACS
3704	05632	4676	JMS	I	PINT
3705	05633	7330	CLA	CLL	CML RAR
3706	05634	0305	AND		FSINZ
3707	05635	3024	DCA		ACS
3708	05636	4435	FENTER		
3709	05637	5246	FSD+FWD+FSINZ=.		
3710	05640	6275	FMP+FWD+FSINM4=.		
3711	05641	2244	FSIN10,	FST+FWD+FSINZ=.	
3712	05642	0000	FEXIT		
3713	05643	3024	DCA		ACS
3714	05644	4435	FENTER		
3715	05645	5151	FSD		ONE
3716	05646	0140	FSGT		
3717	05647	1210	FJMP+FWD+FSINOK=.		
3718	05650	3235	FLO+FWD+FSINZ=.		
3719	05651	0000	FEXIT		
3720	05652	4675	JMS	I	PSGN
3721	05653	2025	ISZ		ACE
3722	05654	4435	FENTER		
3723	05655	5230	FSD+FWD+FSINZ=.		
3724	05656	1615	FJMP+BKWD=.	-FSIN10	
3725	05657	3226	FSD+FWD+FSINZ=.		
3726	05660	6225	FMP+FWD+FSINZ=.		
3727	05661	2227	FST+FWD+FSINZ2=.		
3728	05662	6234	FMP+FWD+FSINZ3=.		
3729	05663	4236	FAD+FWD+FSINZ4=.		
3730	05664	6224	FMP+FWD+FSINZ2=.		
3731	05665	4237	FAD+FWD+FSINZ5=.		
3732	05666	6222	FMP+FWD+FSINZ2=.		
3733	05667	4240	FAD+FWD+FSINZ6=.		
3734	05672	6222	FMP+FWD+FSINZ2=.		
3735	05671	4241	FAD+FWD+FSINZ7=.		
3736	05672	6213	FMP+FWD+FSINZ=.		
3737	05673	0000	FEXIT		
3738	05674	5624	JMP	I	SIN
3739	05675	0726	PSGN,	SGN	
3740	05676	6434	PINT,	INT	
3741	05677	0000	FTANT1,	27010	
3742	05702	0000			
3743	05701	0000			

3744	25702	2020	FTANT2, 01010
3745	25703	2020	
3746	25704	2020	
3747	25705	2020	FSINZ, 01010
3748	25706	2020	
3749	25707	2020	
3750	25710	2020	FSINZ2, 01012
3751	25711	2020	
3752	25712	2020	
3753	25713	2020	FSINC1, 20361222717325
3754	25714	2020	
3755	25715	2020	
3756	25716	2020	FSINC3, 16447755315722
3757	25717	2020	
3758	25720	2020	
3759	25721	2020	FSINC4, 57141622311432
3760	25722	2020	
3761	25723	2020	
3762	25724	2020	FSINC5, 17551263211276
3763	25725	2020	
3764	25726	2020	
3765	25727	2020	FSINC6, 60251125617406
3766	25730	2020	
3767	25731	2020	
3768	25732	2020	FSINC7, 20161222717325
3769	25733	2020	
3770	25734	2020	
3771	25735	2020	FSINM4, 60341222212020
3772	25736	2020	
3773	25737	2020	
3774	25740	2020	UPARRX, FENTER
3775	25741	2020	FST+BKWD+FSINZ
3776	25742	2020	FSGE
3777	25743	2020	FJMP+FWD+EXPLONG-
3778	25744	2020	FEXIT
3779	25745	2020	JMS I PINT
3780	25746	2020	FENTER
3781	25747	2020	F3B+BKWD+FSINZ
3782	25750	2020	FSEQ
3783	25751	2020	FJMP+FWD+EXPLONG-
3784	25752	2020	FLO+BKWD+FSINZ
3785	25753	2020	F3B+FWD+FUPRC1-
3786	25754	2020	FSLT
3787	25755	2020	FJMP+FWD+EXPLONG-
3788	25756	2020	FLO+BKWD+FSINZ
3789	25757	2020	FEXIT
3790	25760	2020	JMP I ,+1
3791	25761	2020	UPARROW
3792	25762	2020	FUPRC1, 207717700
3793	25763	2020	
3794	25764	2020	EXPLONG,FLO OPERAND
3795	25765	2020	FEXIT
3796	25766	2020	JMS I PLOG
3797	25767	2020	FENTER
3798	25770	2020	FMP+BKWD+FSINZ

3799	25771	2020	FEXIT
3800	25772	2020	JMS I PEXP
3801	25773	2020	JMP I ,+1
3802	25774	2020	OPDCNE
3803	25775	2020	PLOG, LOG
3804	25776	2020	PEXP, EXP
3805			
3806			
3807			
3808			
3809			
3810			
3811			
3812			
3813	6000	PAGE	
3814			
3815			
3816	06200	2020	EXP, 0
3817	06201	2020	FENTER
3818	06202	2020	F3B+FWD+FEYPC1-
3819	06203	2020	FST+FWD+FEYPU-
3820	06204	2020	FEXIT
3821	06205	2020	JMS I PPINT
3822	06206	2020	CLA CLL CML RAR
3823	06207	2020	TAD ACS
3824	06210	2020	DCA ACS
3825	06211	2020	FENTER
3826	06212	2020	FST+FWD+FEYPI-
3827	06213	2020	FAD+FWD+FEYPU-
3828	06214	2020	FST+FWD+FEYPF-
3829	06215	2020	FMP+FWD+FEYPF-
3830	06216	2020	FAD+FWD+FEYPC2-
3831	06217	2020	FST+FWD+FEYPU-
3832	06220	2020	FLO+FWD+FEYPI-
3833	06221	2020	FEXIT
3834	06222	2020	JMS I PFI
3835	06223	2020	FXXPF, NOP
3836	06224	2020	DCA FEYPI
3837	06225	2020	TAD ACS
3838	06226	2020	CMA CLL CML RAL
3839	06227	2020	TAD FEYPI
3840	06230	2020	SNL
3841	06231	2020	CIA
3842	06232	2020	IAC
3843	06233	2020	DCA FEYPI
3844	06234	2020	FENTER
3845	06235	2020	FLO+FWD+FEYPC3-
3846	06236	2020	F3B+FWD+FEYPU-
3847	06237	2020	FAD+FWD+FEYPC4-
3848	06240	2020	F3B+FWD+FEYPF-
3849	06241	2020	FST+FWD+FEYPU-
3850	06242	2020	FLO+FWD+FEYPF-
3851	06243	2020	FMP+FWD+FEYPC5-
3852	06244	2020	FAD+FWD+FEYPC5-
3853	06245	2020	FAD+FWD+FEYPU-


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3854 06046 2216 FST+FWD+FEXPU-,
3855 06047 3220 FLD+FWD+FEXPF-,
3856 06050 7214 FDV+FWD+FEXPU-,
3857 06051 4240 FAD+FWD+FEXPC6-,
3858 06052 2215 FST+FWD+FEXPF-,
3859 06053 2270 FEXIT
3860 06054 1025 TAD ACE
3861 06055 1261 TAD FEXPI
3862 06056 3025 DCA ACE
3863 06057 5620 JMP I EXP
3864 06060 6434 PRINT, INT
3865 06061 2020 FEXPI, 2/210
3866 06062 0200
3867 06063 0200
3868 06064 2020 FEXPU, 2/010
3869 06065 0200
3870 06066 0200
3871 06067 2020 FEXPF, 0/010
3872 06070 0200
3873 06071 0200
3874 06072 2020 FEXPC1, 2025/4271/0300
3875 06073 4271
3876 06074 2320
3877 06075 2275 FEXPC2, 2075/3552/7022
3878 06076 3552
3879 06077 7022
3880 06100 6124 FEXPC3, 6124/6477/0715
3881 06101 6477
3882 06102 0715
3883 06103 2044 FEXPC4, 2044/7643/0062
3884 06104 7643
3885 06105 0062
3886 06106 1744 FEXPC5, 1744/3372/3400
3887 06107 3372
3888 06110 3400
3889 06111 2024 FEXPC6, 2024/0020/0000
3890 06112 0020
3891 06113 0020
3892 06114 0200 LOG, 0
3893 06115 1024 TAD ACS
3894 06116 7710 SPA CLA
3895 06117 5447 JMP I PARGERR
3896 06120 1025 TAD ACE
3897 06121 3365 DCA LOGACE
3898 06122 1155 TAD 0200
3899 06123 3025 DCA ACE
3900 06124 4435 FENTER
3901 06125 2641 FST+BKWD+,-FEXPU
3902 06126 4244 FAD+FWD+FLOGC1-,
3903 06127 2640 FST+BKWD+,-FEXPF
3904 06130 3644 FLD+BKWD+,-FEXPU
3905 06131 5241 FSB+FWD+FLOGC1-,
3906 06132 7643 FDV+BKWD+,-FEXPF
3907 06133 2644 FST+BKWD+,-FEXPF
3908 06134 6645 FMP+BKWD+,-FEXPF
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3909 06135 6216 FMP+FWD+FLOGC2-,
3910 06136 4220 FAD+FWD+FLOGC3-,
3911 06137 6650 FMP+BKWD+,-FEXPF
3912 06140 6651 FMP+BKWD+,-FEXPF
3913 06141 4220 FAD+FWD+FLOGC4-,
3914 06142 6653 FMP+BKWD+,-FEXPF
3915 06143 5632 FSB+BKWD+,-FEXPC6
3916 06144 2655 FST+BKWD+,-FEXPF
3917 06145 3217 FLD+FWD+LOGFWD-,
3918 06146 5221 FSB+FWD+LOGOKW-,
3919 06147 4660 FAD+BKWD+,-FEXPF
3920 06150 6656 FMP+BKWD+,-FEXPC1
3921 06151 0020 FEXIT
3922 06152 5714 JMP I LOG
3923 06153 2024 FLOGC2, 2024/6253/2521
3924 06154 6253
3925 06155 2521
3926 06156 2207 FLOGC3, 2027/5421/3604
3927 06157 5421
3928 06160 3604
3929 06161 2025 FLOGC4, 2025/6125/1007
3930 06162 6125
3931 06163 1007
3932 06164 2174 LOGFWD, 2174
3933 06165 0200 LOGACE, 0
3934 06166 0200 0
3935 06167 2174 LOGOKW, 2174/0200/0
3936 06170 0200
3937 06171 0020
3938 06172 2025 FLOGC1, 2025/5202/3632
3939 06173 5202
3940 06174 3632
3941
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3949 6200 PAGE
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3953
3954 06200 0200 ATN, 0
3955 06201 1024 TAD ACS
3956 06202 3272 DCA PATNSX
3957 06203 3224 DCA ACS
3958 06204 4435 FENTER
3959 06205 2271 FST+FWD+FATNT-,
3960 06206 2265 FST+FWD+FATNAX-,
3961 06207 5275 FSB+FWD+FATNC1-,
3962 06210 0140 FSGT
3963 06211 1254 FJMP+FWD+ATNBIG-,
```



3964	06212	5275	FGB=FWD+LATNC2=.
3965	06213	0140	FSGT
3966	06214	1209	FJMP=FWD+LATNLOW=.
3967	06215	3151	FLD ONE
3968	06216	7260	FQV=FWD+LATNT=.
3969	06217	2257	FST=FWD+LATNT=.
3970	06220	3152	ATNLOW, FLU ZERO
3971	06221	2316	FST=FWD+LATNC=.
3972	06222	1254	FLD=FWD+LATNT=.
3973	06223	5267	FGB=FWD+LATNC3=.
3974	06224	0120	FSGE
3975	06225	1212	FJMP=FWD+LATNOT=.
3976	06226	3250	FLD=FWD+LATNT=.
3977	06227	4266	FAD=FWD+LATNC6=.
3978	06230	2246	FST=FWD+LATNT=.
3979	06231	3314	FLD=FWD+LATNCJ=.
3980	06232	7244	FQV=FWD+LATNT=.
3981	06233	4262	FAD=FWD+LATNC8=.
3982	06234	2202	FST=FWD+LATNT=.
3983	06235	3263	FLD=FWD+LATNC5=.
3984	06236	2301	FST=FWD+LATNC=.
3985	06237	3237	ATNNOT, FLD=FWD+LATNT=.
3986	06240	6235	FMP=FWD+LATNT=.
3987	06241	2240	FST=FWD+LATNT=.
3988	06242	3261	FLD=FWD+LATNC6=.
3989	06243	6236	FMP=FWD+LATNT=.
3990	06244	4262	FAD=FWD+LATNC7=.
3991	06245	6234	FMP=FWD+LATNT=.
3992	06246	4263	FAD=FWD+LATNC8=.
3993	06247	6232	FMP=FWD+LATNT=.
3994	06250	4264	FAD=FWD+LATNC9=.
3995	06251	6230	FMP=FWD+LATNT=.
3996	06252	4151	FAD ONE
3997	06253	6223	FMP=FWD+LATNT=.
3998	06254	4263	FAD=FWD+LATNC=.
3999	06255	2221	FST=FWD+LATNT=.
4000	06256	3215	FLD=FWD+LATNAX=.
4001	06257	5151	FSB ONE
4002	06260	0140	FSGT
4003	06261	1204	FJMP=FWD+LATNBIG=.
4004	06262	3260	FLD=FWD+LATNC=.
4005	06263	5213	FSB=FWD+LATNT=.
4006	06264	2212	FST=FWD+LATNT=.
4007	06265	3211	ATNBIG, FLD=FWD+LATNT=.
4008	06266	0000	FEXIT
4009	06267	1272	TAD FATNSX
4010	06270	3024	OCA ACS
4011	06271	5600	JMP I ATN
4012	06272	0000	FATNSX, 0
4013	06273	0000	FATNAX, 01010
4014	06274	0000	
4015	06275	0000	
4016	06276	0000	FATNT, 01010
4017	06277	0000	
4018	06300	0000	

4019	06301	0000	FATNTT, 01010
4020	06302	0000	
4021	06303	0000	
4022	06304	1634	FATNC1, 1634100010000
4023	06305	0000	
4024	06306	0000	
4025	06307	2007	FATNC2, 20071777610000
4026	06310	7776	
4027	06311	0000	
4028	06312	1774	FATNC3, 17741223012427
4029	06313	2230	
4030	06314	2427	
4031	06315	2016	FATNC4, 20161733117272
4032	06316	7331	
4033	06317	7272	
4034	06320	2004	FATNC5, 20041140512216
4035	06321	1405	
4036	06322	2216	
4037	06323	1756	FATNC6, 17561246214562
4038	06324	0462	
4039	06325	4562	
4040	06326	5764	FATNC7, 57641422113403
4041	06327	4221	
4042	06330	3403	
4043	06331	1766	FATNC8, 17661314116672
4044	06332	3141	
4045	06333	6672	
4046	06334	5775	FATNC9, 57751252512337
4047	06335	2525	
4048	06336	2337	
4049	06337	0000	FATNC, 01010
4050	06340	0000	
4051	06341	0000	
4052	06342	2016	FATNC, 20161220717325
4053	06343	2207	
4054	06344	7325	
4055	06345	6234	FATNCJ, 62341000010000
4056	06346	0000	
4057	06347	0000	
4058			
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4068			
4069	06350	1126	TABDO, TAD COLUMN
4070	06351	7041	CIA
4071	06352	1367	TAD TABDOES
4072	06353	7740	SMA SZA CLA
4073	06354	5360	JMP TABOX

/GET WHERE WE ARE NOW.

/COMPARE AGAINST WHERE WE WANT TO BE,
/DO WE HAVE TO BACK UP?
/NOPE.



/BASIC.LBE

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4074 26355 1007 TAD 0215 /YEP, GIVE C.R.
4075 26356 4433 JMS I PPUTCH /SEND IT
4076 26357 4433 JMS I PPUTCH /ALSO SEND A NULL CHARACTER TO ALL TTY TO RETURN.
4077 26358 1126 TABOK, TAD COLDHN /GET WHERE WE ARE.
4078 26359 7040 CMA /NEGATE=1
4079 26360 1367 TAD TABDES /WHERE DO WE WANT TO BE?
4080 26361 7750 SNL SFA CLA /?
4081 26362 5770 JMP I TPRINT /HERE, EXIT.
4082 26363 1051 TAD 0240 /FARTHER UP.
4083 26364 5357 JMP TABOK+1 /GIVE SPACE AND LOOP AGAIN.
4084
4085
4086 26367 0000 TABDES, 0
4087 26372 0207 TPRINT, PRINTC /NORMAL EXIT LOCATION.
4088
4089
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/BASIC.LBE

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4099
4100
4101
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4104 6400 PAGE
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4109
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4111
4112 06400 0200 CHKFIT, 0
4113 06401 1160 TAD 04
4114 06402 4544 JMS I SPLEFT
4115 06403 5620 JMP I CHKFIT
4116 06404 4551 JMS I PLINFIX
4117 06405 4537 JMS I PRESET /RESET ALL I/O DEVICES.
4118 06406 4514 JMS I PPRINTXT
4119 06407 3562 UGH1
4120 06410 3064 DCA SNUMFLG /RESET THIS FLAG NOW
4121 06411 5612 JMP I .+1
4122 06412 2610 NEWLIN /THIS MAY BE RIGHT.
4123
4124
4125
4126
4127
4128
4129 06413 0200 RMLEFT, 0
4130 06414 7100 CLL
4131 06415 1003 TAD ARRLOC
4132 06416 7430 SZL
4133 06417 5223 JMP NORLFT
4134 06420 7041 CIA
4135 06421 1004 TAD CODELOC
4136 06422 7620 SNL CLA
4137 06423 2213 NORLFT, ISZ RMLEFT
4138 06424 5613 JMP I RMLEFT
4139
4140
4141
4142
4143
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4145
4146 06425 0200 ABS, 0
4147 06426 3224 DCA ACS
4148 06427 5625 JMP I ABS
4149
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4154 06432 2020 STICKI,0
4155 06431 3003 DCA I ARRLOC
4156 06432 2023 ISZ ARRLOC
4157 06433 5630 JMP I STICKI
4158
4159
4160
4161
4162
4163 06434 0020 INT, 0
4164 06435 4006 JMS I PFIY
4165 06436 7003 CLA
4166 06437 0000 JMS I PANDRM
4167 06438 5634 JMP I INT
4168
4169
4170
4171
4172
4173
4174 06441 0020 SXERR, 0 /INCASE THIS IS JMS'D TO.
4175 06442 7003 CLA /AND REMAKE INTO AN "AND"
4176 06443 3041 DCA SXERR
4177 06444 4077 JMS I PERROR
4178 06445 2331 TEXT 'SYNTAX'
4179 06446 1024
4180 06447 0130
4181 06452 0000
4182 06451 4031 ATLINE, TEXT ' AT LINE '
4183 06452 2040
4184 06453 1011
4185 06454 1005
4186 06455 4020
4187
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4189
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4191
4192
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4195
4196 06456 7570 07570, 7570
4197 06457 1024 UPARROW, TAD ACS
4198 06460 7700 SNA CLA
4199 06461 1256 TAD 07570
4200 06462 1025 TAD ACE
4201 06463 7700 SNA CLA
4202 06464 5047 JMP I PARGERR
4203 06465 4526 JMS I PFIY
4204 06466 5067 JMP I .01
4205 06467 4365 UPARR2
4206
4207
4208
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4209
4210
4211 06470 4570 MOREDIM, MUSTBE /, ,
4212 06471 3763 3763
4213 06472 7240 DIM, CLA CMA
4214 06473 3034 DCA DIMFLAG
4215 06474 4501 JMS I PEVAL
4216 06475 4566 ISIT / (CR) OR '\ '
4217 06476 2000 2000
4218 06477 5270 JMP MOREDIM
4219 06500 5503 JMP I PEXECUTE/YES.
4220
4221
4222
4223
4224
4225 06501 4034 DELETED, TEXT ' DELETED, '
4226 06502 0514
4227 06503 0524
4228 06504 0504
4229 06505 3700
4230
4231
4232
4233
4234
4235 06506 1050 AMATCH, TAD WORD
4236 06507 3064 DCA SNUMFLG
4237 06510 1064 TAD SNUMFLG
4238 06511 3457 DCA I FPTR
4239 06512 2057 ISZ FPTR
4240 06513 1260 TAD GPTR
4241 06514 3056 DCA EPTR
4242 06515 4566 ISIT / *REM*
4243 06516 1762 1762
4244 06517 5516 JMP I PSLOOP
4245 06520 5721 JMP I .01
4246 06521 3043 REMPack
4247
4248
4249
4250
4251
4252
4253
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4255
4256 06522 3723 BREAK, 3723/2417/2056
4257 06523 2417
4258 06524 2056
4259 06525 3722 READY, TEXT ' _READY... '
4260 06526 0504
4261 06527 0431
4262 06530 5637
4263 06531 3700
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4264      6531  CRLF=-1
4265
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4276      06532  0000  ISIG,  2
4277      06533  4502      JMS I  PNONBLK
4278      06534  1344      TAD    07706A
4279      06535  7102      CLL
4280      06536  1263      TAD    012
4281      06537  7402      SNL
4282      06540  7204      CLA
4283      06541  7400      SZL
4284      06542  2332      ISZ    ISIG
4285      06543  5712      JMP I  ISIG
4286      06544  7706  07706A, 7706
4287
4288
4289
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4292
4293      06545  1042  PZERODN,TAD  PRTEMP
4294      06546  1043      TAD    DECEXP
4295      06547  7710      SPA CLA
4296      06550  5354      JMP    .+4
4297      06551  1043      TAD    DECEXP
4298      06552  7240      CMA
4299      06553  3242      DCA    PRTEMP
4300      06554  1044      TAD    PNUMBUF
4301      06555  3225      DCA    ACE
4302      06556  7344      CLA CLL CMA RAL
4303      06557  7240  DIGLUP, CMA
4304      06560  1043      TAD    DECEXP
4305      06561  7440      SZL
4306      06562  5365      JMP    .+3
4307      06563  1375      TAD    02568
4308      06564  4033      JMS I  PPUTCH
4309      06565  3343      DCA    DECEXP
4310      06566  1425      TAD I  ACE
4311      06567  4033      JMS I  PPUTCH
4312      06570  2225      ISZ    ACE
4313      06571  2042      ISZ    PRTEMP
4314      06572  5357      JMP    DIGLUP
4315      06573  5774      JMP I  .+1
4316      06574  5123      FMTENF
4317
4318      06575  0256  02568, 256
```

/***** 8 K INSERT RETURN,

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4319
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4345
4346      6600      PAGE
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4350
4351      6661      LSF=6661
4352      6662      LCF=6662
4353      6666      LLS=6666
4354
4355
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4358
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4360
4361
4362
4363
4364      06600  3334  INTER, DCA  INTAC      /SAVE ALL IMPORTANT STUFF ON INTERRUPT.
4365      06601  7010      RAR
4366      06602  3335      DCA    INTL
4367      06603  6234      RIB
4368      06604  0374      AND    070
4369      06605  1375      TAD    06202
4370      06606  3371      DCA    INTCIF      /SAVE INSTRUCTION FIELD
4371      06607  6234      RIB
4372      06610  0072      AND    07
4373      06611  7106      CLL RTL      /SHIFT IT OVER
```



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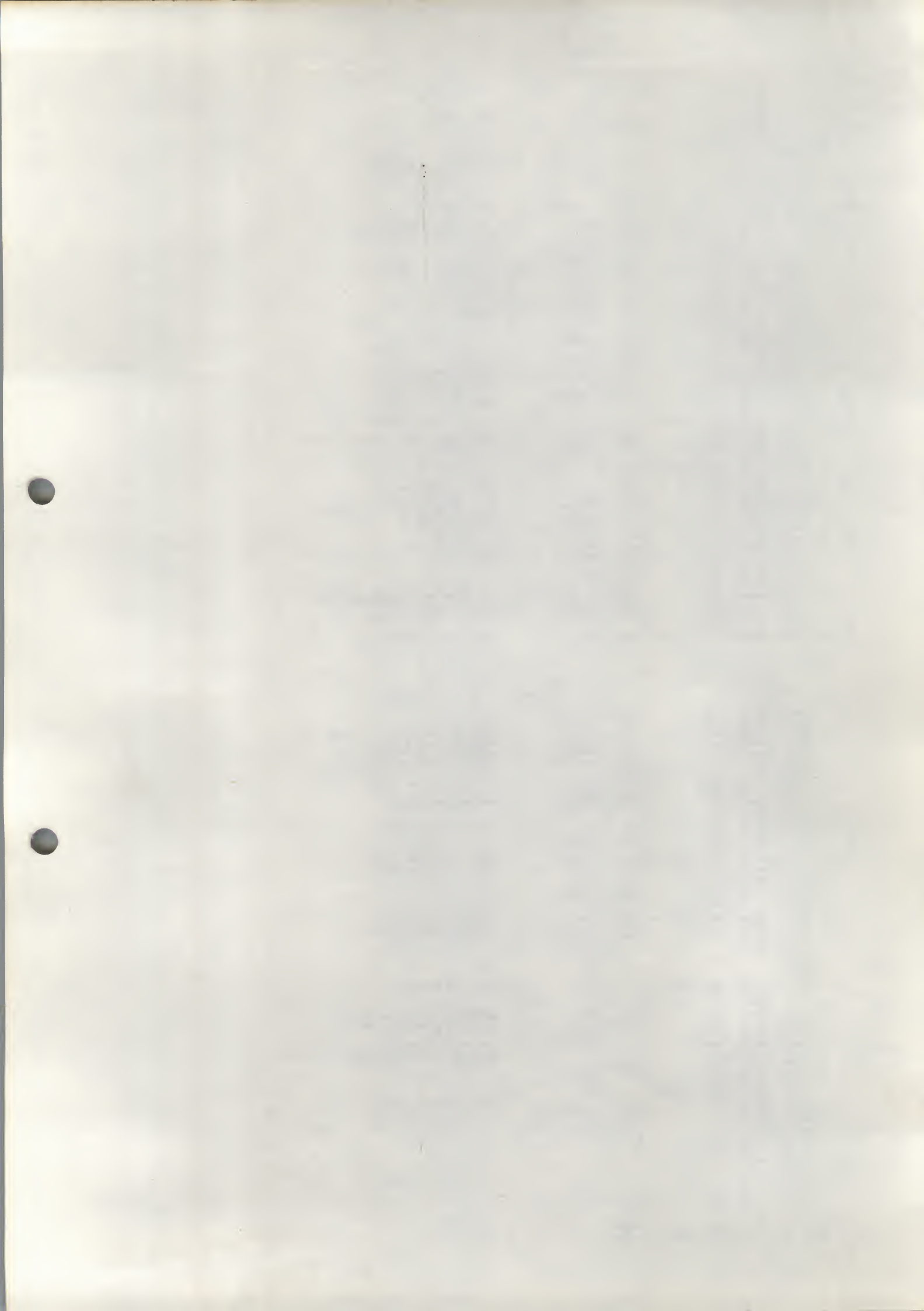
4374 06612 7024 RAL
4375 06613 1215 TAD 06201A /AND THE INSTRUCTION FIELD
4376 06614 3370 DCA INTECF /JUST IN CASE,
4377 06615 6201 06201A, CDF 0
4378
4379 IFZERO MACHINE4
4380 06616 7200 NOP /TO KEEP PAGE SAME SIZE,
4381
4382
4383 IFNZRD MACHINE4
4384 JMS I SPECIAL /CHECK FOR SPECIAL INTERRUPT DEVICE,
4385
4386
4387 06617 6241 TSF /IS IT THE TELEPRINTER,
4388 06620 5223 JMP /NO
4389 06621 6742 TCF ,*3
4390 06622 5310 JMP INODUN /YEP, CLEAN IT UP.
4391 06623 6661 LSF /PRINTER?
4392 06624 5227 JMP ,*3
4393 06625 6662 LCF /YEP,
4394 06626 5310 JMP INODUN /PUNCH?
4395 06627 6321 PSF
4396 06630 5233 JMP ,*3
4397 06631 6222 PCF
4398 06632 5310 JMP INODUN
4399 06633 6211 RSF /READER?
4400 06634 5241 JMP INOPPP /NOPE,
4401 06635 7330 CLA CLL CML RAR /4000 TO AC
4402 06636 6212 RRB /READ IN THE CHARACTER,
4403 06637 3740 DCA I PHRCHAR
4404 06640 5344 JMP INTEXT /EXIT FROM THE INTERRUPT,
4405
4406 06641 6663 INOPPP, 6663 /LINE PRINTER ERROR?
4407 06642 5245 JMP /NOPE,
4408 06643 6667 6667 INOTTT /YEP, IGNORE THE LINE PRINTER NOW,
4409 06644 5344 JMP INTEXT /AND EXIT,
4410
4411 06645 6031 INOTTT, KSF /IS IT THE KEYBOARD,
4412 06646 7402 MLT /NOPE,
4413 06647 6036 KRB /READ IN THE CHARACTER,
4414 06650 0227 AND 0177 /CHOP OFF THE STUFF,
4415 06651 3336 DCA INTEMP /SAVE IN THE INTERRUPT TEMPORARY,
4416 06652 1336 TAD INTEMP /RECALL IT NOW
4417 06653 1376 TAD 07775 /IS IT A "C
4418 06654 7452 SNA /?
4419 06655 5265 JMP FCNTLC /YES!
4420 06656 1377 TAD 077640 /"O?
4421 06657 7650 SNA CLA
4422 06660 5303 JMP FCNTLC
4423 06661 7330 CLA CLL CML RAR
4424 06662 1336 TAD INTEMP /SET HIGH ORDER BIT ON FOR SAFETY,
4425 06663 3741 DCA I PINCHAR /PUT IT AWAY
4426 06664 5344 JMP INTEXT /AND EXIT FROM INTERRUPT,
4427
4428 06665 1134 FCNTLC, TAD NOINT /CHECK IF OK TO INTERRUPT,

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4429 06666 7640 SZA CLA
4430 06667 5300 JMP CNTLCF /NOT OK,
4431 06670 6002 CNTLCR, IOF /TURN OFF INTERRUPTS TO BE SURE,
4432 06671 4542 JMS I DELOUT /DELETE OUTPUT BUFFERS,
4433 06672 4537 JMS I PRESET /RESET ALL I/O DEVICES,
4434 06673 4514 JMS I PPRINTXT /GIVE THE STOP MESSAGE
4435 06674 6522 BREAK /
4436 06675 1125 TAD PPDLIST /RESET PUSH DOWN POINTER
4437 06676 3036 DCA PDL
4438 06677 5520 JMP I PEDIT /AND RESTART CISAB
4439
4440 06700 7040 CNTLCF, CMA /RESET "C FOUND SWITCH,
4441 06701 3134 DCA NOINT
4442 06702 5344 JMP INTEXT
4443
4444 06703 4542 FCNTLC, JMS I DELOUT /DELETE THE OUTPUT NOW, BABY,
4445 06704 1133 TAD CNTLO /NEGATE CNTLO SWITCH,
4446 06705 7040 CMA
4447 06706 3133 DCA CNTLO
4448 06707 5344 JMP INTEXT
4449
4450 06710 3742 INODUN, DCA I POFLAG /RESET OUTPUT FLAG,
4451 06711 4743 JMS I POUTIT /PERFORM THE NEXT OPERATION,
4452 06712 5344 JMP INTEXT
4453
4454
4455
4456
4457 06713 0000 BIDL, 0 /THE IDLE ROUTINE
4458 06714 6002 IOF
4459 06715 7201 CLA IAC
4460 06716 3337 DCA BUSY /RESET THE IDLE TASK FLAG,
4461 06717 6214 RDF /SAVE THE DATA FIELD NOW,
4462 06720 1215 TAD 06201A
4463 06721 3362 DCA INTECF /AND PLACE IN WHERE TO GO ON IDLE EXIT,
4464 06722 1331 TAD IDLELK /RESTORE THE IDLE ROUTINES PARAMETERS,
4465 06723 7104 CLL RAL
4466 06724 1332 TAD IDLEAC
4467 06725 6211 IDLECD, CDF 10
4468 06726 6202 IDLECI, CDF 0
4469 06727 6021 ION
4470 06730 5733 JMP I IDLEPC /AND DO THE IDLE STUFF
4471
4472
4473 06731 0000 IDLELK, 0
4474 06732 0020 IDLEAC, 0
4475 06733 7415 IDLEPC, NULJOB
4476
4477 06734 0000 INTAC, 0
4478 06735 0000 INTL, 0
4479 06736 0000 INTEMP, 0
4480 06737 0000 BUSY, 0
4481
4482 06740 7256 PHRCHAR, HCHAR
4483 06741 7255 PINCHAR, INCHAR

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/BASIC.L8E

PAL8-V9 / / PAGE 12-7

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4484 06742 7120 POFLAG, OFLAG
4485 06743 7043 POUTIT, OUTIT
4486
4487
4488
4489 06744 1337 INTEXT, TAO BUSY /GET STATUS.
4490 06745 7652 SNA CLA
4491 06746 5165 JMP INTOU /WE WERE NOT IDLE. EXIT NOW.
4492 06747 3337 DCA BUSY /RESET BUSY FLAG.
4493 06750 1200 TAO 0
4494 06751 3333 DCA IOLEPC
4495 06752 1314 TAD INTAC /SAVE
4496 06753 3332 DCA IOLEAC
4497 06754 1332 TAD INTL
4498 06755 3331 DCA IOLELK
4499 06756 1371 TAD INTEIF

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/BASIC.L8E

PAL8-V9 / / PAGE 13

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4500 06757 3326 DCA IOLECF
4501 06760 1372 TAD INTOCF
4502 06761 3325 DCA IOLECOF
4503 06762 7402 INTECO, HLT /IDLE ROUTINES CALLING CDF.
4504 06763 6201 ION
4505 06764 5713 JMP I SIDLE /AND GO BACK NOW.
4506
4507
4508 06765 1335 INTOU, TAD INTL
4509 06766 7104 CLL RAL
4510 06767 1334 TAD INTAC
4511 06770 7402 INTOCF, HLT
4512 06771 7402 INTOCF, HLT
4513 06772 6201 ION
4514 06773 5400 JMP I 0
4515
4516
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4520 06774 0270 072, 70
4521 06775 6202 06202, 6202
4522 06776 7775 07775, 7775
4523 06777 7764 077640, 7764
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4553 07000 0000 PUTER, 0 /THE CHARACTER PUTTER.
4554 07001 3241 DCA OPUTC /SAVE THE CHARACTER NOW.

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4555 07002 6214 RDF
4556 07003 1205 TAD C6201B
4557 07004 3237 DCA PUTCOF
4558 07005 6201 06201B, CDF 2
4559 07006 7410 SKP
4560 07007 4761 PUTLP, JMS I PRIDLE
4561 07012 1240 TAD OCCUNT
4562 07011 7350 SNA
4563 07012 5226 JMP PUTCIN
4564 07013 1315 TAD DCMLIM
4565 07014 7950 SNA CLA
4566 07015 8207 JMP PUTLP
4567 07016 1131 TAD OUTDEV
4568 07017 7241 CIA
4569 07020 1138 TAD CDEV
4570 07021 7400 SZA CLA
4571 07022 5207 JMP PUTLP
4572
4573 07023 6002 PUTCIN, IDP
4574 07024 1131 TAD CNTLO
4575 07025 7600 SNA CLA
4576 07026 1131 TAD OUTDEV
4577 07027 3132 DCA ODEV
4578 07030 2242 ISZ OCCUNT
4579 07031 1241 TAD OPUTC
4580 07032 3634 DCA I IPOINT
4581 07033 4301 JMS CBOP
4582 07034 1165 IPOINT, OSLOW
4583 07035 4243 JMS OUTIT
4584 07036 6201 ION
4585 07037 7402 PUTCOF, HLT
4586 07040 5600 JMP I PUTER
4587
4588
4589 07041 0000 OPUTC, 0
4590 07042 0000 OCCUNT, 0
4591
4592
4593 07043 0000 OUTIT, 0
4594 07044 1320 TAD OFLAG
4595 07045 7640 SZA CLA
4596 07046 5643 JMP I OUTIT
4597 07047 1242 TAD OCCUNT
4598 07050 7450 SNA
4599 07051 5643 JMP I OUTIT
4600 07052 1314 TAD 07777
4601 07053 3242 DCA OCCUNT
4602 07054 1132 TAD CDEV
4603 07055 1273 TAD OPOTAB
4604 07056 3300 DCA OFLAG
4605 07057 1700 TAD I OFLAG
4606 07060 3262 DCA ,+2
4607 07061 1665 TAD I OPOINT
4608 07062 7402 HLT
4609 07063 7200 CLA

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/READ THE DATA FIELD NOW.
/CREATE PROPER CDF INSTRUCTION.
/SAVE CDF INSTRUCTION.
/RESET CDF TO THIS DATA FIELD.

/CALL IN THE IOLE ROUTINE NOW.
/GET NUMBER OF CHARACTERS IN THE BUFFER.

/PUT IT IN
/TEST FOR TOO MANY IN BUFFER.

/YEP, WAIT AWHILE.

/CHECK FOR A MATCH.

/NOPE, WAIT FOR BUFFER TO BECOME EMTY.

/TURN THEM OFF,
/CHECK FOR CONTROL "0" ACTIVE.

/MOVE OVER OUTPUT DEVICE.

/STICK A CHARACTER IN THE BUFFER.

/BOP UP THE POINTER NOW.

/SEND IT OUT
/RESTORE INTERRUPTS.
/USER'S CORRECT CDF

/FLAG STILL UP, EXIT.

/NO CHARS TO GO, SO WE WILL.

/MAP DEVICE INTO LABEL TOO ET WHAT TO DO.
/AND ALSO RESET FLAG AT THE SAME TIME.
/GET THE MAGIC INSTRUCTION.
/AND PLACE IT HERE.
/GET THE CHARACTER.
/AND HALT.
/AFTER PRINTING THE CHARACTER,

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4610 07064 4301 JMS CBOP
4611 07065 1165 OPOINT, OSLOW
4612 07066 5643 JMP I OUTIT
4613
4614 07067 7200 OPNUL, CLA
4615 07072 3300 DCA OFLAG
4616 07071 4542 JMS I DELOUT
4617 07072 5643 JMP I OUTIT
4618
4619 07073 7074 OPOTAB, ,+1
4620 07074 5267 JMP OPNUL
4621 07075 6046 TLS
4622 07076 6026 PLS
4623 07077 6666 LLS
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4627 07100 0000 OFLAG, 0
4628
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4631 07101 0000 OBOP, 0
4632 07102 1701 TAD I OBOP
4633 07103 1312 TAD OTST1
4634 07104 7450 SNA
4635 07105 1315 TAD OFLOW
4636 07106 1313 TAD OCOR
4637 07107 3701 DCA I OBOP
4638 07110 2301 ISZ OBOP
4639 07111 5701 JMP I OBOP
4640
4641
4642 07112 6601 OTST1, -OBHIGH
4643 07113 1200 OCOR, OBHIGH+1
4644
4645 07114 7777 07777, 7777
4646
4647 07115 7765 OFLOW, -OBHIGH-1*OSLOW
4648 7115 DCMLIM=OFLOW
4649
4650
4651 07116 0000 RESET1, 0
4652 07117 7201 CLA IAC
4653 07120 3131 DCA OUTDEV
4654 07121 7201 CLA IAC
4655 07122 3130 DCA OUTD2
4656 07123 7201 CLA IAC
4657 07124 3127 DCA INDEV
4658 07125 3133 DCA CNTLO
4659 07126 3134 DCA NOINT
4660 07127 6201 CDF 0
4661 07130 3756 DCA I SHRCHAR
4662 07131 3762 DCA I SINCHAR
4663 07132 3757 DCA I PBUSY
4664 07133 3760 DCA I PPXRA

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/WE SHALL INCREMENT THE POINTER.

/AND EXIT.

/RESET OFLAG
/NO DEVICES INACTIVE.
/DELETE ANY STRAY CHARACTERS IN THE BUFFER.
/AND RETURN NOW.

/NULL DEVICE (NO ECHOING)

/CLEAR NO-INTERUPT FLAG.
/RESET DATA FIELD TO HERE.
/CLEAR ALL INPUT FLAGS.

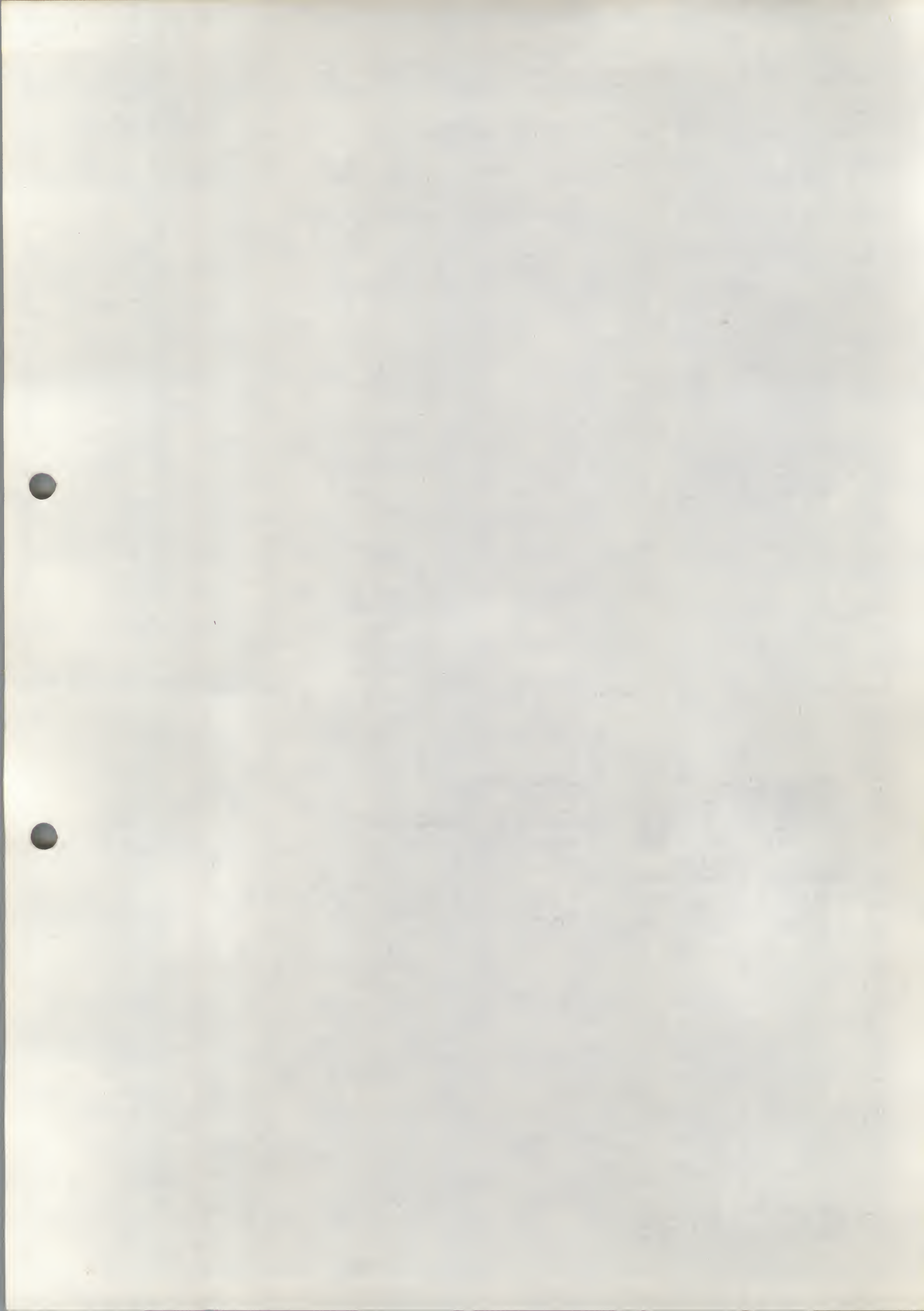
/AND ALSO THE BUSY FLAG.
/RESET NULL AFTER C.R. FLAG.

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4665
4666
4667 IFNZRO MACHINE*
4668 CIF CDF 10
4669 JMS I LLLUUU
4670
4671 IFZERO MACHINE*
4672 07134 6211 CDF 10
4673 07135 6201 ION
4674
4675
4676 07136 6565 6565
4677 07137 5716 JMP I RESET1
4678
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4680 07140 0352 LLLUUU, UUULLL
4681
4682
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4684 07141 0700 RESET2, 0
4685 07142 4537 JMS I PRESET
4686 07143 4502 JMS I DELOUT
4687 07144 3320 DCA OFLAG
4688 07145 5741 JMP I RESET2
4689
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4692 07146 0200 OUTDEL, 0
4693 07147 3242 DCA OCOUNT
4694 07150 1355 TAD CPRST
4695 07151 3265 DCA OPOINT
4696 07152 1355 TAD OPRST
4697 07153 3234 DCA IPOINT
4698 07154 5746 JMP I OUTDEL
4699
4700 07155 1165 OPRST, OBLow
4701 07156 7256 QMRCHAR, MRCHAR
4702 07157 6737 PBUSY, BUSY
4703 07160 2776 PPYRA, PUTYRA
4704 07161 6713 PSIDLE, SIDLE
4705 07162 7255 SINCHAR, INCHAR
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4727 07163 7201 LPTOUT, CLA IAC
4728 07164 7201 PTPOUT, IAC
4729 07165 7001 TTYOUT, IAC
4730 07166 3131 DCA OUTDEV
4731 07167 1131 TAD OUTDEV
4732 07170 3130 DCA OUTD2
4733 07171 5375 JMP DEVCOM
4734
4735 07172 7201 PTRIN, CLA IAC
4736 07173 7201 TTYIN, IAC
4737 07174 3127 DCA INDEV
4738
4739 07175 4177 DEVCOM, JMS GETWO
4740 07176 4570 DEVCOM, MUSTBE
4741 07177 2000 2000
4742 07200 5503 JMP I PEXECUTE
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4771 07201 0200 GETCH, 0
4772 07202 4270 JMS GWHERE
4773 07203 4657 JMS I QSIDLE
4774 07204 1255 TAD INCHAR
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4775 07205 7450 SNA
4776 07206 5203 JMP GETCH+2
4777 07207 0027 AND 0177
4778 07210 3254 DCA GTEMP
4779 07211 3255 DCA INCHAR
4780 07212 3256 DCA HRCHAR
4781 07213 1135 TAO
4782 07214 7650 SNA CLA
4783 07215 5224 JMP GRB
4784 07216 1254 TAO GTEMP
4785 07217 1260 TAO 07601
4786 07220 7600 SZL CLA
4787 07221 5224 JMP SNA
4788 07222 1261 GDELA, TAO 0137
4789 07223 5601 JMP I GETCH
4790
4791 07224 1254 GRB, TAO GTEMP
4792 07225 1255 TAO 07770
4793 07226 7450 SNA
4794 07227 5222 JMP GDELA
4795 07230 1262 TAO 07612
4796 07231 7450 SNA
4797 07232 5247 JMP GALT
4798 07233 1266 TAO 0143
4799 07234 7650 SNA CLA
4800 07235 5247 JMP GALT
4801 07236 1254 TAO GTEMP
4802 07237 1263 TAO 07640C
4803 07240 7510 SPA
4804 07241 5251 JMP GOUT
4805 07242 1264 TAO 07746
4806 07243 7500 SNA
4807 07244 5251 JMP GOUT
4808 07245 1265 TAO 0132
4809 07246 5601 JMP I GETCH
4810
4811
4812 07247 1267 GALT, TAO 0175
4813 07250 5601 JMP I GETCH
4814
4815 07251 7200 GOUT, CLA
4816 07252 1254 TAO GTEMP
4817 07253 5601 JMP I GETCH
4818
4819 07254 0000 GTEMP, 0
4820 07255 0000 INCHAR, 0
4821 07256 0000 HRCHAR, 0
4822
4823 07257 6713 CBIDLE, BIDLE
4824
4825 07260 7601 07601, 7601
4826 07261 0137 0137, 137
4827 07262 7612 07612, 7612
4828 07263 7640 07640C, 7640
4829 07264 7746 07746, 7746

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4830 07265 0132 0132, 132
4831 07266 0143 0143, 143
4832 07267 0175 0175, 175
4833
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4837 07270 0000 GWHERE, 0
4838 07271 7240 CLA CMA
4839 07272 1127 TAO INDEV
4840 07273 2270 ISZ GWHERE
4841 07274 7750 SPA SNA CLA
4842 07275 5670 JMP I GWHERE
4843
4844 07276 1264 TAO 07746
4845 07277 3254 DCA GTEMP
4846 07300 3256 DCA HRCHAR
4847 07301 6014 RFC
4848 07302 1256 HRLOP, TAO HRCHAR
4849 07303 7440 SZL
4850 07304 5321 JMP HFOUND
4851 07305 2255 ISZ INCHAR
4852 07306 5302 JMP HRLOP
4853 07307 2254 ISZ GTEMP
4854 07310 5302 JMP HRLOP
4855
4856 07311 7201 CLA IAC
4857 07312 3131 OCA OUTDEV
4858 07313 3133 OCA CNTLO
4859 07314 4514 JMS I PPRINTX

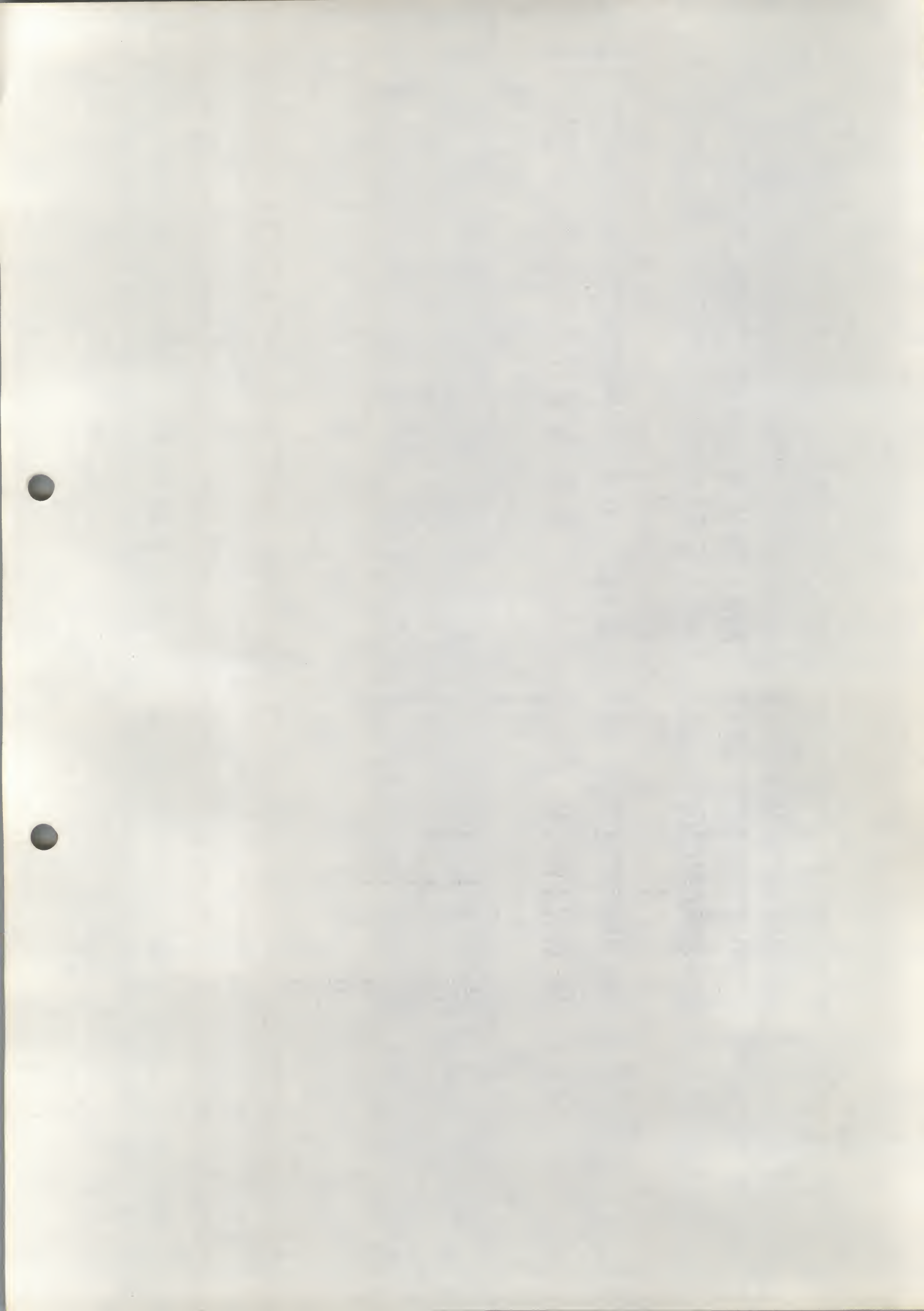
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/INPUT=TTY

/START THE READER NOW.

/GOT IT.

/RESET OUTPUT DEVICE FOR A SECOND.
 /RESET THE CONTROL "O" SWITCH ALSO.
 /GIVE THE MESSAGE.




```

4860 07315 7323 HRMES
4861 07316 7201 CLA IAC
4862 07317 3127 DCA INDEV
4863 07320 5670 JMP I GWHERE
4864
4865 07321 2270 HFOUND, ISZ GWHERE
4866 07322 5670 JMP I GWHERE
4867
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4869
4870 07323 3724 HRMES, TEXT "TTY."
4871 07324 2431
4872 07325 3700
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4877 07326 0000 CONT, 0
4878 07327 6201 CDF 0
4879 07330 3742 DCA I CCYRA
4880 07331 1743 CONTLP, TAD I CONTFP
4881 07332 6210 CDF 10
4882 07333 7650 SNA CLA
4883 07334 5340 JMP CONTD
4884 07335 4744 JMS I CONTW
4885 07336 6201 CDF 0
4886 07337 5331 JMP CONTLP
4887 07340 3133 CONTD, DCA CNTLC
4888 07341 5726 JMP I CONT
4889
4890
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4893 07342 2776 CCYRA, PUTYRA
4894 07343 7102 CONTFP, DFLAG
4895 07344 6713 CONTW, BIDL
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/THIS ROUTINE WAITS FOR OUTPUT TO STOP.
 /SET D.F. TO THIS FIELD.
 /SET OR RESET NULL AFTER C.R. FLAG.
 /GET OUTPUT FLAG STATUS.
 /RESET D.F.
 /IS OUTPUT DONE?
 /YES, EXIT.
 /NOPE, IDLE LOOP TILL INTERRUPT.
 /RESET D.F. TO ZERO.
 /AND LOOP.
 /CLEAR CONTROL 0 STATE.

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4915 07345 0000 XGMUST, 0
4916 07346 4177 JMS GETWD
4917 07347 1345 TAD XGMUST
4918 07350 3352 DCA XMUST
4919 07351 5353 JMP XMUST+1
4920 07352 0000 XMUST, 0
4921 07353 1452 TAD I WORD
4922 07354 6201 CDF 0
4923 07355 1752 TAD I XMUST
4924 07356 6211 CDF 10
4925 07357 2352 ISZ XMUST
4926 07360 7650 SNA CLA
4927 07361 5752 JMP I XMUST
4928 07362 5500 JMP I PSXERN
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4947 07363 4477 ARGERR, JMS I PERROW
4948 07364 0122 TEXT "ARGUMENT"
4949 07365 0725
4950 07366 1505
4951 07367 1624
4952 07370 0000
4953 07371 5660 DOTZERO, TEXT ".0"
4954 07372 2000
4955
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4962 07373 4477 RTERR, JMS I PERROR
4963 07374 2201 TEXT "RATE"
4964 07375 2405
4965 07376 2000
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/GIVE RATE ERROR FOR CLOCK.


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IFZERO MACHINE
NOPUNCH

5003	07400	1136	PLOT,	TAD	DISB		/GET BUFFER ADDRESS.
5004	07401	7640		SZA	CLA		/IS THERE ONE?
5005	07402	5220		JMP	DBGOT		
5006	07403	1240		TAD	PASSUME		/GET ASSUMED LENGTH.
5007	07404	4544		JMS	I	SPLEFT	/ROOM LEFT TO FIT IT IN.
5008	07405	7410		SKP			
5009	07406	5755		JMP	I	NPSERR	/NO.
5010	07407	1003		TAD	ARRLOC		/GET A USABLE ADDRESS.
5011	07410	3311		DCA	DLAST		/SAVE AWAY.
5012	07411	1003		TAD	ARRLOC		/NOW UPDATE OUR ARRAY.
5013	07412	1240		TAD	PASSUME		
5014	07413	3203		DCA	ARRLOC		
5015	07414	7240		CLA	CMA		
5016	07415	1003		TAD	ARRLOC		
5017	07416	3312		DCA	DLAST		/GET LAST WORD OF OUR BUFFER NOW.
5018	07417	4314		JMS	PLOTB		/AND GO.
5019							/FIGURE OUT
5020	07420	3313	DBGOT,	DCA	DBAD		/TELL IT POINT IS ON SCREEN
5021	07421	4177		JMS	GETWD		/GET NEXT SYNTATICAL ELEMENT.
5022	07422	4641		JMS	I	PHEVAL	/EVALUATE OUR EXPRESSION.
5023	07423	4435		FENTER			
5024	07424	6217		FMP	FSHIFT+FWD.		/CORRECT NUMBER FOR SYMETRICAL SCREEN.

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5025	07425	2020		FEXIT			
5026	07426	4326		JMS	DBLIT		/PUT IT IN THE BUFFER.
5027	07427	4641		JMS	I	PHEVAL	/GET Y COORDINATE.
5028	07430	4326		JMS	DBLIT		/PUT IT IN THE BUFFER.
5029	07431	1313		TAD	DBAD		/IS IT A BAD ONE? <OFF SCREEN?>
5030	07432	7041		CLA			
5031	07433	1311		TAD	DINP		
5032	07434	3311		DCA	DINP		
5033	07435	7330		CLA	CLL	CHL RAR	/4000=END OF BUFFER CHARACTER.
5034	07436	3711		DCA	I	DINP	
5035	07437	5642		JMP	I	PDEVCON	
5036							
5037	07440	1750	PASSUME,1750				
5038	07441	7415	PHEVAL, MEVAL				
5039	07442	7176	PDEVCON,DEVCON				
5040	07443	2007	FSHIFT, 2007/1600/2200				
5041	07444	1600					
5042	07445	0000					/MAGIC CONSTANT FOR SYMETRICAL SCREEN.
5043							
5044							
5045							
5046							
5047							
5048	07446	1136	USE,	TAD	DISB		/IS DISPLAY BUFFER ASSIGNED.
5049	07447	7640		SZA	CLA		
5050	07450	5661		JMP	I	USKIPIY	/YES, EXIT.
5051	07451	4262		JMS	GETARY		/GET THE ARRAY DATA
5052	07452	1020		TAD	AC1		/GET FIRST FREE LOCATION
5053	07453	3311		DCA	DLAST		
5054	07454	1017		TAD	AC2		/GET SECOND FREE LOCATION
5055	07455	3312		DCA	DLAST		/SAVE AWAY.
5056	07456	4314		JMS	PLOTB		/SET UP STUFF.
5057	07457	4177		JMS	GETWD		/GET NEXT ELIAMENT AFTER VARIABLE.
5058	07460	5642		JMP	I	PDEVCON	
5059	07461	0467	USKIPIY,SKIPIY				
5060							
5061							
5062	07462	0000	GETARY, 0				
5063	07463	4571	GET+MUSTBE				/THIS ROUTINE GETS THE FIRST AND LAST LOCATIONS OF AN ARRAY.
5064	07464	7000	7000				/MUST BE A VARIABLE.
5065	07465	1250		TAD	WORD		/GET POINTER TO VARIABLE.
5066	07466	3302		DCA	UVP		
5067	07467	2050		ISZ	WORD		
5068	07470	1450		TAD	I	WORD	/GET POINTER NOW.
5069	07471	7021		IAC			
5070	07472	3020		DCA	AC1		/SAVE AWAY.
5071	07473	2050		ISZ	WORD		
5072	07474	1450		TAD	I	WORD	
5073	07475	3303		DCA	UIP		
5074	07476	2050		ISZ	WORD		
5075	07477	1450		TAD	I	WORD	
5076	07500	3304		DCA	U2P		
5077	07501	4502		JMS	I	PGETADD	
5078	07502	0000	UVP,				
5079	07503	0000	UIP,				

IDENTIFICATION

PRODUCT CODE	DEC-08-LBASA-A1-LA
PRODUCT NAME	LISTING OF 8K BASIC R/T
DATE CREATED	DECEMBER 13, 1973
MAINTAINER	PDP-8 DEVELOPMENT

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PAL8-V9 / / PAGE 1

THIS BASIC IS A COMBINATION OF LAB-8/E BASIC AND 8K-BASIC FOR THE PDP-8. TO CREATE IT FOR THE LAB-8/E SET "MACHINE=1", TO CREATE IT FOR THE PDP-8 SET "MACHINE=0".

THIS CODE OVERLAYS THE BINARY LOADER IN FIELD ONE TO MAKE LAB-8/E BASIC SELF STARTING.

```

IFNZRO    MACHINE
FIELD     1

*7700

JMP I     UGETWO

*6000

DCA        UTEMP
TAD        INTHLT
OCA I      INTFLC
TAD        UTEMP
SZA
JMP I      INTPLC
CIF COF 0

```

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```

56      JMP I      .+1
57      START
58
59      INTHLT, HLT
60      INTPLC, 7700
61
62
63
64
65
66
67
68      /BASIC4,52
69
70
71
72
73
74
75
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89      0700      FIELD 0      /TO HELP BINARY LOADER IN CASE HE BLOWS IT.
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110

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```
5000 07504 0000 U2P, 0
5001 07505 7326 CLA CLL CML RTL /+2
5002 07506 1067 TAD ADDRESS
5003 07507 3017 DCA AC2
5004 07510 5002 JMP I GETARY
5005
5006 07511 0000 DLAST, 0
5007 07511 7511 DINP=DLAST
5008 07512 0000 DDLAST, 0
5009 07513 0000 DBAD, 0
5010
5011
5012
5013
5014
5015
5016
5017
5018 07514 0000 PLOTB, 0
5019 07515 7240 CLA CMA
5020 07516 1311 TAD DLAST
5021 07517 3130 DCA D15B
5022 07520 1325 TAD 04001
5023 07521 3712 DCA I DDLAST
5024 07522 7330 CLA CLL CML RAR
5025 07523 3711 DCA I DLAST
5026 07524 5714 JMP I PLOTB
5027
5028 07525 4001 04001, 4001
5029
5030
5031
5032
5033
5034
5035
5036
5037
5038
5039 07526 0000 DBLIT, 0
5040 07527 1024 TAD ACS
5041 07530 7700 SMA CLA
5042 07531 5335 JMP ,+4
5043 07532 7326 DBBAD, CLA CLL CML RTL
5044 07533 3313 DCA DBAD
5045 07534 5347 JMP DBISRT
```

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5135 07535 1025 TAD ACE
5136 07536 1354 TAD 07577B
5137 07537 7700 SMA CLA
5138 07540 5332 JMP DBBAD
5139 07541 1025 TAD ACE
5140 07542 1065 TAD 012
5141 07543 3025 DCA ACE
5142 07544 4506 JMS I PFIX
5143 07545 7202 CLA
5144 07546 1010 TAD AC3
5145 07547 4356 DBISRT, JMS DBPUT
5146 07550 7330 CLA CLL CML RAR
5147 07551 2311 ISZ DINP
5148 07552 4356 JMS DBPUT
5149 07553 5726 JMP I DBLIT
5150
5151
5152 07554 7577 07577B, 7577
5153 07555 0370 NPSPERR, SPACERR
5154
5155
5156 07556 0000 DBPUT, 0
5157 07557 3017 DCA AC2
5158 07560 7350 CLA CLL CMA RAR /+4001=3777
5159 07561 1711 TAD I DINP
5160 07562 7650 SMA CLA
5161 07563 5755 JMP I NPSPERR /NO ROOM IN BUFFER, BOMB HIM,
5162 07564 1017 TAD AC2
5163 07565 3711 DCA I DINP
5164 07566 5756 JMP I DBPUT
5165
5166
5167 07567 4477 UUDATA, JMS I PERROR
5168 07570 0155 TEXT 'A-D FULL'
5169 07571 0440
5170 07572 0625
5171 07573 1414
5172 07574 0000
5173
5174
5175
5176
5177
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5180
5181
5182
5183
5184
5185
5186 ENPUNCH
5187
5188
5189 IFNZRO MACHINE*
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5192
5191
5192
5193
5194
5195
5196      7000      IFZERO MACHINE<
5197      *PLOT>
5198
5199
5200
5201
5202
5203
5204
5205
5206
5207
5208
5209      27400 0200 SETUP, 0
5210      27401 1005      TAD PSYMTAB
5211      27402 3056      DCA EPTR
5212      27403 1006      TAD NSYMTAB
5213      27404 3057      DCA FPTR
5214      27405 3139      DCA DISB
5215      27406 5600      JMP I SETUP
5216
5217
5218
5219
5220
5221      IFNZRO MACHINE<
5222      CDEVCOM,DEVCOM
5223      >
5224
5225      IFZERO MACHINE<
5226      0000      CDEVCOM=0
5227      >
5228
5229
5230
5231
5232
5233
5234
5235
5236
5237
5238
5239
5240
5241
5242      27407 0000 ISET, 0
5243      27410 6050      DILC
5244      27411 6055      DIXY

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5245      27412 4614      JMS I IIXR
5246      27413 5607      JMP I ISET
5247      27414 7141 IIXR, RESET2
5248
5249
5250
5251
5252
5253
5254
5255
5256      IFZERO MACHINE<
5257      NOPUNCH>
5258
5259
5260
5261
5262
5263
5264
5265
5266      27415 0000 MEVAL, 0
5267      27416 4566      ISIT /IS IT A C.R.
5268      27417 2000      2000
5269      27420 7410      SKP
5270      27421 5500      JMP I PSXERR
5271      27422 4566      ISIT /,
5272      27423 3763      3763
5273      27424 5227      JMP .+3
5274      27425 4177      JMS GETWD
5275      27426 5216      JMP MEVAL+1
5276      27427 1215      TAD MEVAL
5277      27430 5631      JMP I MEVALGO
5278
5279      27431 1007 MEVALGO,EVALGO
5280
5281
5282
5283
5284
5285
5286
5287      27432 1136 CLEAR, TAD DISB
5288      27433 7450      SNA /IS IT THERE?
5289      27434 5400      JMP I CDEVCOM /NOPE.
5290      27435 3013      DCA INDEX1
5291      27436 7330      CLA CLL CML RAR /4000
5292      27437 3413      DCA I INDEX1
5293      27440 6201      CDF 0 /RESET INPUT POINTER ALSO.
5294      27441 1013      TAD INDEX1
5295      27442 3645      DCA I COINP
5296      27443 6211      CDF 10
5297      27444 5400      JMP I CDEVCOM
5298
5299

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```

5300 07445 7511 CDINP, DINP
5301
5302
5303
5304
5305 07446 0000 LLLJMS, 0
5306 07447 1646 TAD I LLLJMS
5307 07450 2246 ISZ LLLJMS
5308 07451 3257 DCA LLLJMP
5309 07452 4657 JMS I LLLJMP
5310 07455 7410 SKP

```

/IN CASE OF SKIPPING RETURN.

```

5311 07454 2246 ISZ LLLJMS
5312 07455 6213 CIF CDF 10
5313 07456 5646 JMP I LLLJMS
5314
5315
5316 07457 0000 LLLJMP, 0
5317 07460 1657 TAD I LLLJMP
5318 07461 3257 DCA LLLJMP
5319 07462 5657 JMP I LLLJMP
5320
5321
5322
5323
5324
5325
5326
5327
5328
5329
5330
5331 07463 7326 DELAY, CLA CLL CML RTL
5332 07464 3220 DCA NDELAY
5333
5334
5335
5336
5337 IFNZRO MACHINE<
NULJOB, TAD DISB
5338
5339
5340 IFZERO MACHINE<
5341 ENPUNCH
5342 7415 MEVAL
5343
5344 07415 7201 NULJOB, IAC
5345 07416 5215 JMP NULJOB
5346
5347 NOPUNCH>
5348
5349
5350 07417 3215 DCA DISAUTO
5351 07420 1220 TAD NDELAY
5352 07421 7110 CLL RAR
5353 07422 3220 DCA NDELAY
5354 07423 7430 SZL
5355 07424 5400 JMP I CDEVCOM
5356 07425 1136 TAD DISB
5357 07426 7650 SNA CLA
5358 07427 5215 JMP NULJOB
5359
5360 07430 1415 NULJOB, TAD I DISAUTO
5361 07431 7510 SPA
5362 07432 5254 JMP NULCMD
5363 07433 1256 TAD 07000C
5364 07434 6052 DISO
5365 07435 5234 JMP .-1

```

/+2
 /SET UP DEALY TIME (ONE TIME THROUGH).

/SET UP AUTO INDEX REGISTER NOW.

/WITH POINTER TO OUR BUFFER.
 /UPDATE DELAY WORD.
 /ARE WE FINISHED WITH DELAY COMMAND?
 /YEP, EXIT NOW.
 /GET OUR WORD NOW.
 /ZERO?
 /YEP, WAIT AWHILE.

/BRING DOWN INTO RANGE OF SCREEN.


```

5366 07436 6053 DILX
5367 07437 7230 CLA
5368 07440 1415 TAD I DISAUTO
5369 07441 7510 SPA.
5370 07442 5254 JMP NULCMD
5371 07443 1256 TAD 07000C /CENTER AGAIN,
5372 07444 9752 DISD
5373 07445 5244 JMP .-1
5374 07446 5254 DILX
5375 07447 7230 CLA
5376 07450 6244 DISD
5377 07451 5244 JMP .-1
5378 07452 6244 DILX
5379 07453 5244 JMP NULCMD
5380
5381 07454 7230 NULCMD, CLA
5382 07455 5245 JMP NULJOB
5383
5384 07456 7230 07002C, 7000
5385 07457 6762 NINTECOF, INTECOF
5386
5387
5388
5389
5390
5391
5392
5393
5394
5395
5396
5397
5398
5399
5400
5401
5402 07460 4477 UUNOAB, JMS I PERROR
5403 07461 1617 TEXT 'NO A-D'
5404 07462 4001
5405 07463 5524
5406 07464 0000
5407
5408 07465 0000 CCINTK, 0
5409 07466 6131 6131
5410 07467 5665 JMP I CCINTK
5411 07470 6213 CIF CDF 10
5412 07471 5672 JMP I .+1
5413 07472 0175 CLOCKI
5414
5415
5416
5417
5418
5419 7473 REALTY.
5420 7473 SETRAT.

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5421 7473 SETCLO.
5422 7473 WAITC.
5423 7473 WAIT.
5424 7473 REJECT.
5425 7473 ACCEPT.
5426
5427 07473 1450 TAD I WORD
5428 07474 6213 CDF CIF 10
5429 07475 5676 JMP I .+1
5430 07476 0731 UPCCMD0
5431
5432
5433
5434
5435
5436
5437
5438
5439
5440 7477 TIM.
5441 7477 CLC.
5442 7477 CLS.
5443 7477 ADC.
5444 7477 ADB.
5445
5446 07477 0000 0
5447 07500 1436 TAD I POL
5448 07501 6213 CIF CDF 10 /RECALL CORRECT FUNCTION NUMBER (IT'S ON THE STACK)
5449 07502 4704 JMS I .+2
5450 07503 5677 JMP I ADB
5451 07504 0747 UPFUN
5452
5453
5454
5455
5456
5457
5458
5459
5460 ENPUNCH
5461
5462 IFZERO MACHINE<
5463
5464 7417 *NULJOB+2>
5465
5466
5467 07417 3762 TSTFX, BEGFIX
5468
5469
5470
5471
5472 07420 0000 NOELAY, 0
5473
5474
5475

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5476
5477 07421 0000 TST, 0
5478 07422 4617 JMS I TSTFX
5479 07423 0001 CDF 0
5480 07424 1631 TAD I TSTP
5-01 07425 0211 CDF 10
5482 07426 3016 DCA AC3
5483 07427 4546 JMS I PANORM
5484 07430 5621 JMP I TST
5485

07431 7255 TSTP, INCHAR

0001 FIELD 1

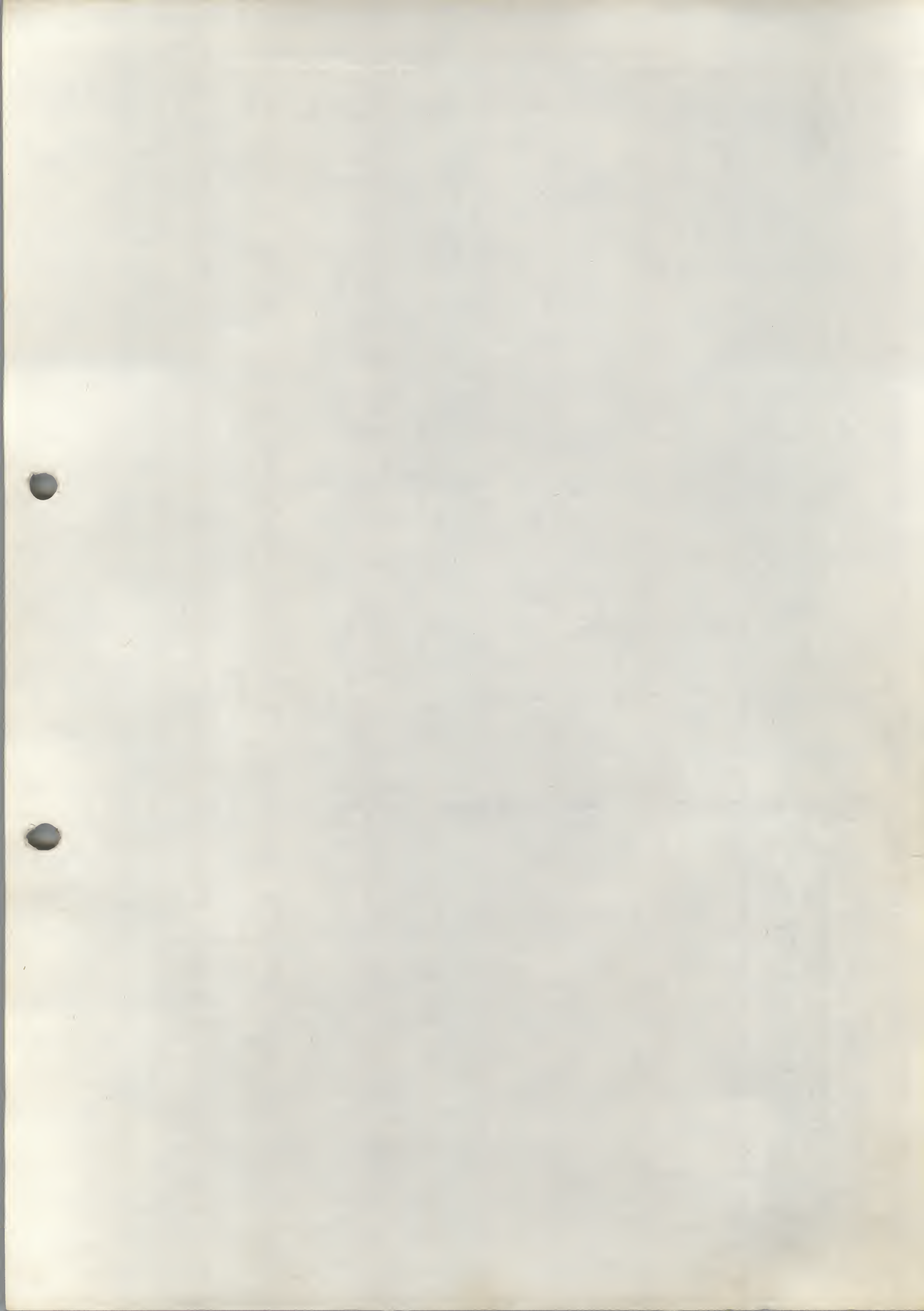
autoindex

5531
5532
5533
5534
5535 0000 *0
5536
5537
5538
5539
5540 10000 2045 TEN, 204510000/0000
5541 10001 0000
5542 10002 0000

/INSERTED IN UPPER CORE BECAUSE OF FEERILITY.

5545 10003 0000 CLKSTS, 0
5546 10004 0000 TIM1, 0
5547 10005 0000 TIM2, 0
5548 10006 0000 ASOGET, 0
5549 10007 0000 ADACPT, 0
5550 10010 0000 ADCUNT, 0
5551 10011 0000 CLTEMP, 0
5552 10012 0000 ADCX, 0
5553 10013 0100 U100, 100
5554 10014 0000 CT3, 0
5555 10015 0000 CT2, 0
5556 10016 0000 CT1, 0
5557 10017 0177 U177, 177
5558 10020 4707 U4707, 4707
5559 10021 7775 U7775, 7775
5560 10022 0000 ACCOUNT, 0
5561 10023 0000 APUT1, 0
5562 10024 0000 APUT2, 0
5563 10025 0000 ADA1, 0
5564 10026 0000 ADA2, 0
5565 10027 0000 ADA3, 0
5566 10030 0550 U0550, U0550
5567 10031 0673 U0673, U0673
5568 10032 0677 U0677, U0677
5569 10033 0007 U7, 7
5570 10034 5010 U5010, 5010
5571 10035 7767 U7767, 7767
5572 10036 0010 U10, 10
5573 10037 0654 UAC1, UUAC1
5574 10040 0661 UAC2, UUAC2
5575 10041 0666 UAC3, UUAC3
5576 10042 0020 PRAC1, AC1
5577 10043 0017 PRAC2, AC2
5578 10044 0016 PRAC3, AC3
5579 10045 0025 PRACE, ACE
5580 10046 0024 PRACS, ACS
5581 10047 0017 U17, 17
5582 10050 7777 U7777, 7777
5583 10051 0362 U0362, D0362
5584 10052 7760 U7760, 7760
5585 10053 0000 UTEMP, 0

exponent sign.



```
5586 10054 0722 UJMP, UUJMP
5587 10055 0707 UJMS, UUJMS
5588 10056 0705 UDEVCON, UDEVCON
5589 10057 6000 UGETWO, 6000
5590 10060 4455 JMS I UJMS
5591 10061 0177 GETWO
5592 10062 5457 JMP I UGETWO
5593 10063 0220 AUTEMP, 0
5594 10064 7767 ACCOR, -11
5595
5596
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5620
5621
5622
5623
5624 0200 PAGE
5625
5626
5627 0175 *-3
5628
5629
5630
5631
5632
5633 10175 6135 CLOCKI, 6135
5634 10176 3003 DCA CLKSTS
5635 10177 2025 ISZ TIM2
5636 10200 5203 JMP *-3
5637 10201 2024 ISZ TIM1
5638 10202 7020 NOP
5639 10203 1006 TAD ABGET
5640 10204 7750 SPA SNA CLA

/ABOUT 512 FOR FUDGE.
/CLEAR CLOCK FLAG.
/AND SAVE STATUS.
/INCREMENT CLOCK.
/IS REAL TIME OPTION RUNNING?
```

```
5641 10205 5234 JMP UIEXT
5642 10206 1007 TAD ADACPT
5643 10207 7650 SNA CLA
5644 10210 5234 JMP UIEXT
5645 10211 1010 TAD ACCUNT
5646 10212 3011 DCA CLTEMP
5647 10213 1012 TAD ADCX
5648 10214 6531 6531
5649 10215 1013 TAD U100
5650 10216 6536 6536
5651
5652 10217 4451 UCLOOP, JMS I UDOAO
5653 10220 4263 JMS APUT
5654 10221 2011 ISZ CLTEMP
5655 10222 5217 JMP UCLOOP
5656 10223 2014 ISZ CT3
5657 10224 5234 JMP UIEXT
5658 10225 2015 ISZ CT2
5659 10226 5234 JMP UIEXT
5660 10227 2016 ISZ CT1
5661 10230 5234 JMP UIEXT
5662 10231 7240 CLA CMA
5663 10232 3006 DCA ABGET
5664 10233 3007 DCA ADACPT
5665
5666
5667 10234 6031 UIEXT, 6031
5668 10235 5243 JMP UIEXT2
5669 10236 6034 6034
5670 10237 0017 AND U177
5671 10240 1021 TAD U7775
5672 10241 7650 SNA CLA
5673 10242 5245 JMP UIEXT3
5674
5675 10243 6131 UIEXT2, 6131
5676 10244 5260 JMP UIEXT4
5677
5678 10245 1020 UIEXT3, TAD U0707
5679 10246 6132 6132
5680 10247 6135 6135
5681 10250 6130 6130
5682 10251 7240 CLA CMA
5683 10252 6130 6130
5684 10253 6032 6032
5685 10254 3006 DCA ABGET
5686 10255 3007 DCA ADACPT
5687 10256 4454 JMS I UJMP
5688 10257 7373 RTERR
5689
5690
5691 10260 6203 UIEXT4, CIF CDF 0
5692 10261 5662 JMP I *-1
5693 10262 6744 INTXT
5694
5695

/NOPE.
/IT SO, ARE WE NOW ACCEPTING DATA?
/NOPE.
/YES, GET NUMBER OF CHANNELS TO DO.
/SET UP OUR COUNTER.
/GET STARTING CHANNEL NUMBER.
/SEND TO TO CONTROLLER.
/TELL IT TO INCREMENT MULTIPLEXOR WHEN DONE.
/PREFORM A-D INSTRUCTION.
/STORE IN USERS BUFFER.
/ALL DONE?
/NOPE, WAIT.
/DONE, INCREMENT TOTAL NUMBER OF SAMPLES.
/ALL DONE, STOP SAMPLING.
/AND GO INTO "REJECT" MODE.
/HAS WE TYPED A CONTROL C?
/NO.
/^C?
/YES! BOMB HIM.
/CLOCK HAS NOT COME UP AGAIN, ALL IS WELL.
/STOP CLOCK IMMEDIATELY.
/CLEAR ALL AFTER PARTIAL ENARLE.
/CLEAR TTY FLAG.
/FREE BUFFER AND ACCEPT MODE.
/INTERUPT EXIT.
/AND DO WHATEVER GOD INTENDED.
```



```

5696
5697 10263 0000 APUT, 0
5698 10264 3023 DCA I APUT1
5699 10265 2002 ISZ ACCOUNT
5700 10266 4025 JMS ABOP
5701 10267 0023 APUT1
5702 10270 1023 TAD APUT1
5703 10271 7041 CIA
5704 10272 1024 TAD APUT2
5705 10273 7000 SZA CLA
5706 10274 5563 JMP I APUT
5707 10275 3036 DCA ABOPGET
5708 10276 3027 DCA ADACPT
5709 10277 4054 JMS I UJMP
5710 10280 7557 UUDATA
5711
5712
5713 10301 0000 AGET, 0
5714 10302 7240 CLA CMA
5715 10303 1022 TAD ACCOUNT
5716 10304 7500 SMA
5717 10305 5312 JMP
5718 10306 7200 CLA
5719 10307 4455 JMS I UJMS
5720 10310 6713 BIDDLE
5721 10311 5302 JMP AGET+1
5722
5723 10312 3022 DCA ACCOUNT
5724 10313 1424 TAD I APUT2
5725 10314 3323 DCA ATEMP
5726 10315 6002 IOF

/THIS ROUTINE PUTS A SAMPLE IN THE BUFFER.
/PLACE IN BUFFER.
/INCREMENT COUNTER.
/ABOP UP POINTER.
/GET INPUT POINTER.
/DOES IT MATCH OUTPUT POINTER?
/NOPE. ALL IS WELL.
/FREE BUFFER.
/AND ACCEPT.
/GIVE ERROR.
/AND ERROR.

/THIS GETS A DATA ITEM FROM BUFFER.
/DECREMENT COUNTER.
/DR SHOULD WE?
/YEP. STILL ITEMS LEFT.
/PUT TO SLEEP
/AND CHECK AGAIN WHEN AWAKE.
/SAVE COUNTER.
/GET THE SAMPLE.
/SAVE WHILE UPDATE TAKES PLACE.

```

```

5727 10316 4325 JMS ABOP
5728 10317 0024 APUT2
5729 10320 6001 IOF
5730 10321 1323 TAD ATEMP
5731 10322 5701 JMP I AGET
5732
5733 10323 0000 ATEMP, 0
5734 10324 0000 ATEMP2, 0
5735
5736
5737
5738 10325 0000 ABOP, 0
5739 10326 1725 TAD I ABOP
5740 10327 3324 DCA ATEMP2
5741 10330 1724 TAD I ATEMP2
5742 10331 2325 ISZ ABOP
5743 10332 1025 TAD ADA1
5744 10333 7450 SNA
5745 10334 1026 TAD ADA2
5746 10335 1027 TAD ADA3
5747 10336 3724 DCA I ATEMP2
5748 10337 5725 JMP I ABOP
5749
5750
5751
5752 10340 0000 UCL5, 0
5753 10341 1023 TAD CLKSTS
5754 10342 4430 JMS I UUSETF
5755 10343 0000
5756 10344 5740 JMP I UCL5
5757
5758
5759 10345 0000 UCLC, 0
5760 10346 6137
5761 10347 4430 JMS I UUSETF
5762 10350 0000
5763 10351 5745 JMP I UCLC
5764
5765
5766
5767
5768
5769
5770
5771
5772
5773
5774
5775
5776
5777
5778
5779
5780 10352 0000 UUULLL, 0
5781 10353 7200 CLA

/ABOP WILL MESS YOU UP IF CALLED RE-ENTRENTLY.

/SAVE POINTER NOW.
/GET VALUE AND SKIP PAST POINTER #1.
/TEST AGAINST UPPER.
/CORRECT TO LOWER.
/AND ADD IN UPPER.
/AND THEN SAVE AWAY.
/AND THEN EXIT.

/GETS STATUS AFTER LAST CLOCK INTERRUPT.

/RETURN WHEN DONE.

/READS IN AS A CLCA
/GET COUNT REGISTER.
/FIX IT UP.
/AND RETURN NOW.

```



```

5782 10354 3022 DCA ACCOUNT
5783 10355 3026 DCA ARDGET
5784 10356 3027 DCA ADACPT
5785 10357 6001 ICM
5786 10358 6002 CIF
5787 10361 5752 JMP I 000000
5788
5789
5790 10362 0000 D0AD, 0
5791 10363 1000 TAD 07760
5792 10364 3000 DCA 05000
5793 10365 6000 0532
5794 10366 6000 0040LP, 0534
5795 10367 7000 SKP
5796 10372 5000 JMP ,+3
5797 10371 2570 ISZ 05000
5798 10372 5000 JMP 0040LP
5799 10373 4000 0523
5800 10374 5762 JMP I 00AD
5801
5802 10375 2000 05000, 0
5803
5804
5805
5806
5807
5808
5809
5810
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5825
5826
5827 0400 PAGE
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```

```

/PLENTY OF DELAY
/SAVE IN A COUNTER WORD.
/START CONVERSION.
/WAIT UNTIL DONE.
/IF NOT DONE, WAIT SOME.
/IF DONE, READ IT IN.

/WAIT UNTIL DONE OR TOO LONG.
/THEN READ IN THE CONVERTED NUMBER.
/AND RETURN.

```

```

5837
5838
5839
5840
5841
5842
5843
5844 10400 4057 USETR, JMS UGETND
5845 10401 4031 JMS I UMEVAL
5846 10402 4032 JMS I UFFIX
5847 10403 0033 AND U7
5848 10404 7106 CLL RTL
5849 10405 7206 RTL
5850 10406 7006 RTL
5851 10407 1034 TAD U010
5852 10410 5216 JMP USETH
5853
5854 10411 4057 USETC, JMS UGETND
5855 10412 4031 JMS I UMEVAL
5856 10413 4032 JMS I UFFIX
5857 10414 0035 AND U767
5858 10415 1036 TAD U10
5859
5860 10416 3053 USETH, OCA UTEMP
5861 10417 7240 CLA CMA
5862 10420 6130 6130
5863 10421 7200 CLA
5864 10422 4031 JMS I UMEVAL
5865 10423 4032 JMS I UFFIX
5866 10424 7041 CIA
5867 10425 6002 IOF
5868 10426 6133 6133
5869 10427 7200 CLA
5870 10430 3004 DCA TIM1
5871 10431 3025 DCA TIM2
5872 10432 1053 TAD UTEMP
5873 10433 6132 6132
5874 10434 6001 ICM
5875 10435 7200 CLA
5876 10436 5050 JMP I UDEVCON
5877
5878
5879
5880 10437 7240 UWAIT, CLA CMA
5881
5882 10440 1025 UWAITC, TAD TIM2
5883 10441 3053 DCA UTEMP
5884 10442 4055 JMS I UJMS
5885 10443 6713 B10LE
5886 10444 1053 TAD UTEMP
5887 10445 7041 CIA
5888 10446 1025 TAD TIM2
5889 10447 7050 SNA CLA
5890 10450 5242 JMP UWAITC+2
5891 10451 4054 RANDAE, JMS I UJMP

```

```

/BOP PAST CHAR.
/THIS ROUTINE SETS UP CLOCK TO A GIVEN TIME.
/FIX UP AC.
/JUST GET SIGNIFICANT BITS (0-7).
/NOW MOVE TO TIME PORTION (3-5)

```

```

/SET OTHER CORRECT BITS NOW.

```

```

/BOP PAST BAD POINTER.
/THIS ROUTINE LOADS CLOCK WITH USERS COMMAND REGISTER.
/MAKE SURE TO TURN INTERRUPTS ON.

```

```

/SAVE ENABLE REGISTER FOR A SECOND.
/CLEAR CLOCK NOW.
/DO WE CAN LOAD IN CORRECT STUFF.
/EVALUATE HIS TIME SETTING.

```

```

/MAKE SURE INTERRUPTS ARE OFF.

```

```

/CLEAR OUT THE TIM NOW.

```

```

/RECALL DESIRED ENABLE REGISTER.
/SEND IT OUT.
/TURN ON INTERRUPTS NOW.
/AND EXIT NOW.

```

```

/WAITS FOR AN INTERRUPT. SET TO LOOK LIKE CLOCK DID IT.

```

```

/GET LOW ORDER WORD.
/SAVE FOR AWHILE.

```

```

/PUT TO SLEEP.
/WAS IT CLOCK (OR OTHER IF CLOCK FUDGED?)

```

```

/COMPARE AGAINST PRESENT CLOCK.

```

```

/NOT CORRECT. WAIT SOME MORE.

```


0636-

```

5892 10452 7175      DEVCOM
5893
5894
5895 10453 1026      UACPT, TAO      ABDGET      /IS BUFFER ASSIGNED?
5896 10454 7740      SZA SZA CLA
5897 10455 7201      CLA IAC      /YES, WE CAN ACCEPT NOW.
5898
5899 10456 3207      UREJT, DCA      ADACPT      /OR REJECT.
5900 10457 5251      JMP      RANDAE      /AND THEN EXIT.
5901
5902
5903
5904
5905
5906
5907
5908 10458 1007      UREAL, TAO      ADACPT      /REAL TIME DECODING FUNCTION.
5909 10459 7850      SNA CLA
5910 10460 5245      JMP      .+3
5911 10461 4054      JMS I      UJMP
5912 10462 2467      SKIPIT
5913 10463 4455      JMS I      UJMS
5914 10464 7802      GETARY
5915 10465 4437      JMS I      UAC1      /PICK UP BUFFER ITEMS.
5916 10466 3023      DCA      APUT1      /GET WE FIRST WORD OF ARRAY.
5917 10467 1003      TAO      APUT1      /SAVE AWAY NOW.
5918 10468 3224      DCA      APUT2      /ALSO SET UP OUTPUT POINTER.
5919 10469 4440      JMS I      UAC2      /GET LAST WORD OF ARRAY.
5920 10470 7041      CIA
5921 10471 3025      DCA      ADA1
5922 10472 4440      JMS I      UAC2      /SAVE IN UPPER LIMIT TESTER.
5923 10473 7031      IAC
5924 10474 3227      DCA      ADA3      /GET AGAIN.
5925 10475 1027      TAO      ADA3      /ADD ONE.
5926 10476 7041      CIA
5927 10477 1023      TAO      APUT1      /AND SAVE AWAY IN BOPPER WORD.
5928 10478 3026      DCA      ADA2      /FINALLY GET THE RESET WORD.
5929 10479 4057      JMS      UGETWD
5930 10480 4031      JMS I      UMEVAL      /AND SAVE AWAY FOR WRAP AROUND CONDITION.
5931 10481 4032      JMS I      UPFIX      /BYPASS REAL TIME STATEMENT.
5932 10482 2047      AND      U17      /EVALUATE AN EXPRESSION
5933 10483 3012      DCA      ADCX      /FIX THE AC NOW.
5934 10484 4031      JMS I      UMEVAL      /JUST GET CHANNEL NUMBER.
5935 10485 4432      JMS I      UPFIX      /SAVE AWAY.
5936 10486 7840      SZA
5937 10487 1050      TAO      U7777      /EVALUATE ANOTHER ITEM.
5938 10488 0047      AND      U17      /FIX IT UP.
5939 10489 7040      CMA
5940 10490 3210      DCA      ACCUNT      /IF ZERO, DO NOT SUBTRACT ONE.
5941 10491 4431      JMS I      UMEVAL      /SUBTRACT ONE TO BRING INTO 0-17 RANGE.
5942 10492 4432      JMS I      UPFIX      /MAKE INTO 0-17.
5943 10493 7161      CLL CML CIA      /NOW NEGATE AND SUBTRACT ONE.
5944 10494 3014      DCA      CT3      /AND SAVE AWAY CORRECT ISZ COUNTER.
5945 10495 7004      RAL
5946 10496 4440      JMS I      UAC2      /NOW GET NUMBER OF SAMPLES (CLOCK TICKS)
                    /SET UP LOW ORDER WORD OF COUNTER.
                    /AND PRESERVE CARRY.

```

```

5947 10527 7161      CLL CML CIA
5948 10528 3015      DCA      CT2
5949 10529 7204      RAL
5950 10530 4437      JMS I      UAC1
5951 10531 7161      CLL CML CIA
5952 10532 3016      DCA      CT1
5953 10533 3022      DCA      ACCUNT      /CLEAR PRESENT BUFFER COUNTER.
5954 10534 7201      CLA IAC
5955 10535 3026      DCA      ABDGET      /SET UP BUFFER.
5956 10536 5456      JMP I      UDEVCON
5957
5958
5959
5960
5961 10541 0200      UTIM, 0
5962 10542 1004      TAO      TIM1      /RETURNS CLOCK TICK.
5963 10543 3146      DCA      .+3
5964 10544 1025      TAO      TIM2
5965 10545 4430      JMS I      USETF
5966 10546 0200      0
5967 10547 5741      JMP I      UTIM
5968
5969
5970 10550 0200      USETF, 0
5971 10551 3053      DCA      UTEMP      /SAVE LOW ORDER WORD OF FAC.
5972 10552 4055      JMS I      UJMS      /SUBROUTINE USED FOR FIX
5973 10553 3762      BEGFIX
5974 10554 1750      TAO I      USETF      /PREPARE TO INTERGIZE IT. (MAAK FAC ONTVANKELLYK VOOR INTEGER
5975 10555 6201      CDF      0      /GET MIDDLE WORD. = 0
5976 10556 3443      DCA I      PPAC2      /PLACE IN FAC.
5977 10557 1053      TAO      UTEMP      /GET LOW WORD.
5978 10558 3444      DCA I      PPAC3      /PLACE IN FAC.
5979 10559 6211      CDF      10
5980 10560 4055      JMS I      UJMS
5981 10561 4600      ANORM
5982 10562 2350      ISZ      USETF      /BYPASS VALUE
5983 10563 5750      JMP I      USETF      /RETURN NOW.
5984
5985
5986
5987
5988
5989
5990
5991
5992
5993
5994 0620
5995
5996
5997
5998
5999
6000
6001

```



```

6022
6023
6024
6025
6026
6027
6028
6029 10620 2020 UADCB, 2
6030 10621 7710 SPA CLA
6031 10622 5222 JMP UADCN
6032 10623 1026 TAD ADDGET
6033 10624 7450 SNA
6034 10625 5220 JMP UABAD
6035 10626 7710 SPA CLA
6036 10627 5215 JMP UADCHY
6037 10628 1227 TAD ADACPT

```

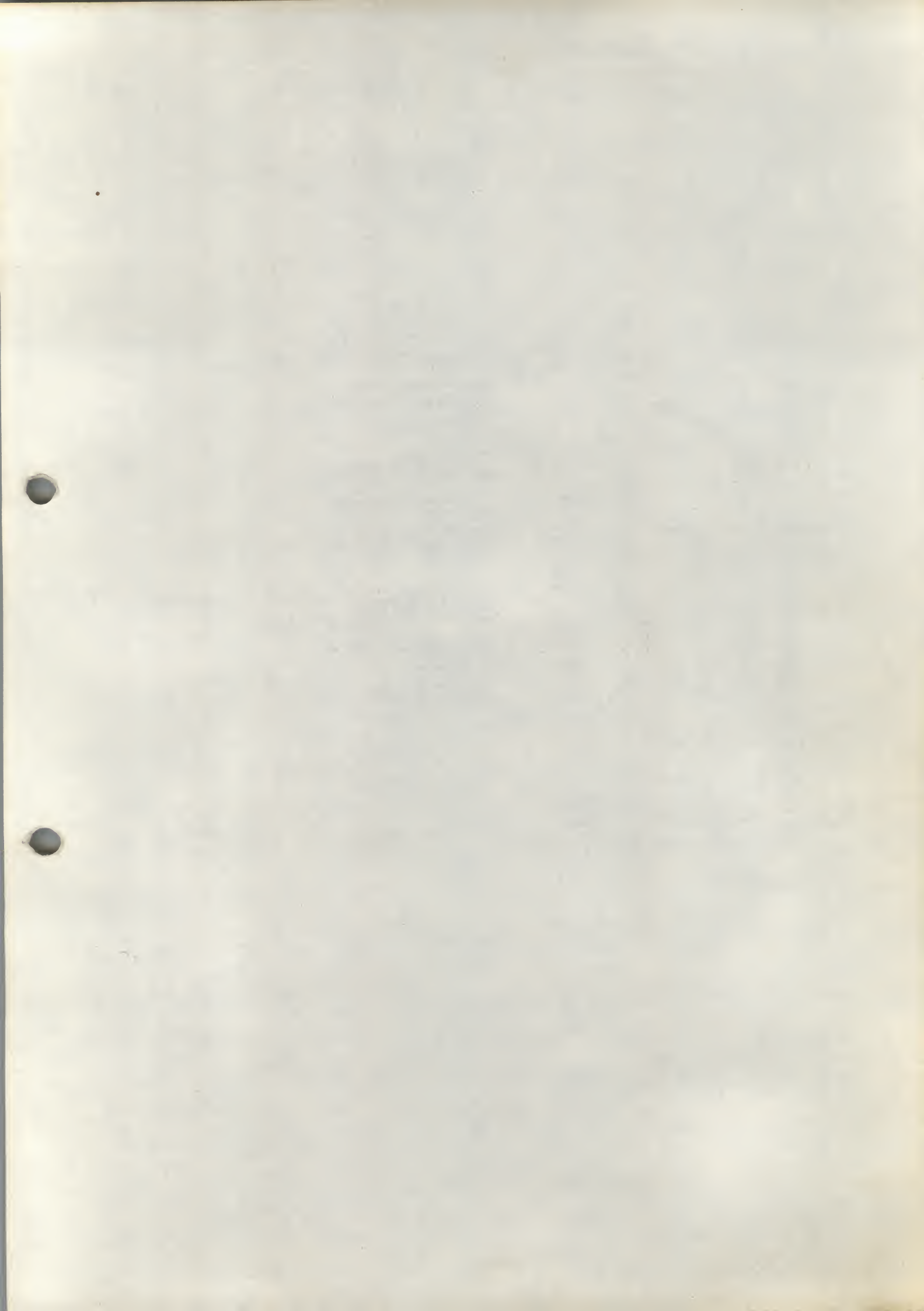
/THIS RETURNS A VALUE FROM THE A-D.
 /BUFFERED OR DIRECT?
 /DIRECT.
 /CHECK TO SEE WHETHER BUFFER ASSIGNED.
 /NO BUFFER ASSIGNED.
 /IS BUFFER ACTIVE?
 /NO, GET COUNT.
 /ACTIVE, ARE WE ACCEPTING DATA?

```

6018 10611 7650 SNA CLA
6019 10612 5215 JMP UADCHY
6020
6021 10613 4653 UADCN, JMS I UPAGET
6022 10614 5231 JMP UINAC
6023
6024 10615 1022 UADCHY, TAO ACCUNT
6025 10616 7640 SZA CLA
6026 10617 5215 JMP UADCN
6027 10620 4454 UABAD, JMS I UJMP
6028 10621 7462 UUNCAD
6029
6030
6031 10622 4432 UADCN, JMS I UFFIX
6032 10623 2047 AND U17
6033 10624 6022 IOF
6034 10625 6531 6531
6035 10626 6536 6536
6036 10627 4051 JMS I UGDAD
6037 10630 6001 IOF
6038
6039 10631 3063 UINAC, DCA AUTEMP
6040 10632 1063 TAO AUTEMP
6041 10633 7510 SPA
6042 10634 7201 CIA
6043 10635 4430 JMS I UUSYF
6044 10636 0200 0
6045 10637 1253 TAO AUTEMP
6046 10640 6221 CDF 2
6047 10641 7710 SPA CLA
6048 10642 7330 CLA CLL CML RAR
6049 10643 3446 DCA I PPACS
6050 10644 1445 TAO I PPACE
6051 10645 1264 TAD ADDCOR
6052 10646 7500 SHA
6053 10647 3445 DCA I PPACE
6054 10650 7200 CLA
6055 10651 6211 CDF 10
6056 10652 5600 JMP I UADCB
6057
6058
6059
6060
6061 10653 0301 UPAGET, AGET
6062
6063
6064
6065 10654 0000 UUAC1, 0
6066 10655 6201 CDF 0
6067 10656 1442 TAD I PPAC1
6068 10657 6211 CDF 10
6069 10660 5654 JMP I UUAC1
6070
6071 10661 0200 UUAC2, 2
6072 10662 6201 CDF 0

```

/NO, CHECK COUNT IN BUFFER.
 /GET VALUE FROM A-D BUFFER.
 /AND FIX IT UP.
 /GET BUFFER COUNTER NOW.
 /NO?
 /NOPE, WE CAN RETURN SOME DATA.
 /NO A-D DATA IN BUFFER.
 /NON-REAL TIME.
 /JUST GET CHANNEL NUMBER.
 /WE CANNOT BE INTERRUPTED HERE.
 /PERFORM THE CONVERSION NOW.
 /RESTORE INTERRUPTS.
 /SAVE FOR A SECOND.
 /PLACE ABSOLUTE VALUE IN FAC.
 /NOW SET SIGN OF FAC.
 /SET TO PICK UP FIELD 0. NO COOLNESS LEFT, DESPITE COMMENTS.
 /IF POSITIVE LEAVE ALONE.
 /SET LEFT MOST BIT ON TO INDICATE NEGATIVE.
 /GET EXPONENT NOW.
 /BRING INTO CORRECT RANGE NOW.
 /IF TOO FAR,
 /DON'T CORRECT.
 /RESET CDF.
 /RETURN TO FIELD ONE



6073	10663	1403	TAD I	PPAC2
6074	10664	5211	CDF	10
6075	10665	5661	JMP I	UUAC2
6076				
6077	10666	0000	UUAC3, 0	
6078	10667	6201	CDF	0
6079	10670	1404	TAD I	PPAC3
6080	10671	6211	CDF	10
6081	10672	5665	JMP I	UUAC3
6082				
6083				
6084				
6085	10673	0000	UUVEVAL, 0	
6086	10674	4455	JMS I	UJMS
6087	10675	7415	MEVAL	
6088	10676	5673	JMP I	UUVEVAL
6089				
6090	10677	0000	UUPFIX, 0	
6091	10700	4455	JMS I	UJMS
6092	10701	4704	FIX	
6093	10702	7200	CLA	
6094	10703	4441	JMS I	UAC3
6095	10704	5677	JMP I	UUPFIX
6096				
6097				
6098	10705	4454	UUDEV, JMS I	UJMP
6099	10706	7176	DEVCON	
6100				
6101				
6102				
6103				
6104				
6105				
6106				
6107				
6108	10707	0000	UUJMS, 0	
6109	10710	6202	CIF	0
6110	10711	1707	TAD I	UUJMS
6111	10712	3314	DCA	+2
6112	10713	4721	JMS I	UUJMS
6113	10714	0000	0	
6114	10715	7410	SKP	
6115	10716	2307	ISZ	UUJMS
6116	10717	2307	ISZ	UUJMS
6117	10720	5707	JMP I	UUJMS
6118				
6119				
6120	10721	7446	UUJMS, LLLJMS	
6121				
6122				
6123				
6124				
6125				
6126				
6127				

/IN CASE OF SKIPPING RETURN

6128				
6129				
6130	10722	0000	UUJMP, 0	
6131	10723	6202	CIF	0
6132	10724	1722	TAD I	UUJMP
6133	10725	3327	DCA	+2
6134	10726	4730	JMS I	UUJMP
6135	10727	0000	0	
6136				
6137	10730	7457	UUJMP, LLLJMP	
6138				
6139				
6140				
6141				
6142				
6143				
6144				
6145				
6146				
6147				
6148				
6149				
6150				
6151	10731	1335	UPCOMDD, TAD	UUFUDGE
6152	10732	1336	TAD	UPJMP
6153	10733	3334	DCA	+1
6154	10734	7402	HLT	
6155	10735	1740	UUFUDGE, -6240	
6156	10736	5737	UPJMP, JMP I	+1
6157	10737	0460	UREAL	
6158	10740	0400	USEYR	
6159	10741	0411	USEYC	
6160	10742	0440	UWAITC	
6161	10743	0437	UWAIT	
6162	10744	0000	0000	
6163	10745	0453	UACCPT	
6164	10746	2456	UREJT	
6165				
6166				
6167				
6168				
6169				
6170	10747	0000	UPFUN, 0	
6171	10750	1356	TAD	UFFUD
6172	10751	1357	TAD	UPJMP
6173	10752	3353	DCA	+1
6174	10753	7402	HLT	
6175	10754	6202	CIF	0
6176	10755	5747	JMP I	UPFUN
6177				
6178	10756	7757	UFFUD, -21	
6179	10757	4760	UPJMP, JMS I	+1
6180	10760	0770	Z240C	
6181	10761	0000	0000	
6182	10762	0541	UTIM	

/NOT USED NOW.

/change to instruction Field 0

6293	17047	7576	
6294	17050	0000	
6295	17051	4113	XXEL, 4110/TEXT 'E'
6296	17052	7514	
6297	17053	0000	
6298	17054	4105	XXEQ, 4105/TEXT 'E'
6299	17055	7500	
6300	17056	4106	XXLT, 4106/TEXT 'L'
6301	17057	7400	
6302	17058	4107	XXGT, 4107/TEXT 'G'
6303	17059	7400	
6304	17060	4015	XXCOMP, 4015/TEXT 'C'
6305	17061	5000	
6306	17062	4016	XXGEI, 4016/TEXT 'I'
6307	17063	7300	
6308	17064	4017	XXCLOSE, 4017/TEXT 'C'
6309	17065	5100	
6310	17070	4017	XXBRK, 4017/TEXT 'J'
6311	17071	3500	
6312	17072	4021	XXTO, 4021/TEXT 'TO'
6313	17073	4024	
6314	17074	1740	
6315	17075	0000	
6316	17076	4022	XXSTEP, 4022/TEXT 'STEP'
6317	17077	4023	
6318	17100	2400	
6319	17101	2040	
6320	17102	0000	
6321	17103	4023	XXOPEN, 4023/TEXT 'O'
6322	17104	5200	
6323	17105	4025	XXLBRAK, 4023/TEXT 'L'
6324	17106	3300	
6325	17107	4024	XXFN, 4024/TEXT 'FN'
6326	17110	0616	
6327	17111	0000	
6328	17112	4025	XXCOS, 4025/TEXT 'COS'
6329	17113	0317	
6330	17114	2300	
6331	17115	4026	XXTAN, 4026/TEXT 'TAN'
6332	17116	2401	
6333	17117	1600	
6334	17120	4027	XXATN, 4027/TEXT 'ATN'
6335	17121	0124	
6336	17122	1600	
6337	17123	4030	XXLOG, 4030/TEXT 'LOG'
6338	17124	1417	
6339	17125	0700	
6340	17126	4031	XXEXP, 4031/TEXT 'EXP'
6341	17127	2530	
6342	17130	2000	
6343	17131	4032	XXSQ, 4032/TEXT 'SQ'
6344	17132	2321	
6345	17133	2200	
6346	17134	4033	XXABS, 4033/TEXT 'ABS'
6347	17135	0102	

6348	17136	2300	
6349	17137	4034	XXSGN, 4034/TEXT 'SGN'
6350	17140	2307	
6351	17141	1600	
6352	17142	4035	XXINT, 4035/TEXT 'INT'
6353	17143	1116	
6354	17144	2400	
6355	17145	4036	XXRND, 4036/TEXT 'RND'
6356	17146	2216	
6357	17147	0400	
6358	17150	4037	XXSIN, 4037/TEXT 'SIN'
6359	17151	2311	
6360	17152	1600	
6361	17153	4040	XXPUT, 4040/TEXT 'PUT'
6362	17154	2025	
6363	17155	2400	
6364	17156	4041	XXLIST, 4041/TEXT 'LIST'
6365	17157	1411	
6366	17160	2324	
6367	17161	0000	
6368	17162	4041	XXLIS, 4041/TEXT 'LIS'
6369	17163	1411	
6370	17164	2300	
6371	17165	4042	XXRUN, 4042/TEXT 'RUN'
6372	17166	2225	
6373	17167	1600	
6374	17170	4043	XXSCR, 4043/TEXT 'SCR'
6375	17171	2303	
6376	17172	2200	
6377	17173	4044	XXGET, 4044/TEXT 'GET'
6378	17174	0705	
6379	17175	2400	
6380	17176	4045	XXADC, 4045/TEXT 'ADC'
6381	17177	0104	
6382	17200	0300	
6383	17201	4046	XXTTY, 4046/TEXT 'TST'
6384	17202	2423	
6385	17203	2400	
6386	17204	4047	XXTIME, 4047/TEXT 'TIM'
6387	17205	2411	
6388	17206	1500	
6389	17207	4050	XXTAB, 4050/TEXT 'TAB'
6390	17210	2401	
6391	17211	2200	
6392	17212	4051	XXUUF, 4051/TEXT 'UUF'
6393	17213	2525	
6394	17214	0600	
6395	17215	4052	XXCLS, 4052/TEXT 'CLS'
6396	17216	0314	
6397	17217	2300	
6398	17220	4053	XXCLC, 4053/TEXT 'CLC'
6399	17221	0314	
6400	17222	0300	
6401	17223	4054	XXADB, 4054/TEXT 'ADB'
6402	17224	0104	

6403	17225	2220	
6404	17226	6020	XXCRLF, 6000/TEXT ' '.
6405	17227	3700	
6406	17230	6000	XXBSLSM, 6000/TEXT 'X'
6407	17231	3420	
6408	17232	6001	XXEND, 6021/TEXT 'END'
6409	17233	2516	
6410	17234	3200	
6411	17235	6022	XXFOR, 6022/TEXT 'FOR '
6412	17236	2617	
6413	17237	2240	
6414	17242	2040	
6415	17241	6023	XXGOSUB, 6023/TEXT 'GOSUB '
6416	17242	2717	
6417	17243	2325	
6418	17244	6024	
6419	17245	3260	
6420	17246	6004	XXGOTO, 6004/TEXT 'GO TO '
6421	17247	2717	
6422	17250	4224	
6423	17251	1700	
6424	17252	2020	
6425	17253	6026	XXTHEN, 6026/TEXT ' THEN '
6426	17254	6024	
6427	17255	1025	
6428	17256	1640	
6429	17257	2000	
6430	17260	6025	XXIF, 6025/TEXT 'IF '
6431	17261	1106	
6432	17262	4000	
6433	17263	6026	XXINPUT, 6026/TEXT 'INPUT '
6434	17264	1116	
6435	17265	2025	
6436	17266	2440	
6437	17267	2000	
6438	17270	6007	XXLET, 6007/TEXT 'LET '
6439	17271	1405	
6440	17272	2440	
6441	17273	2000	
6442	17274	6010	XXNEXT, 6010/TEXT 'NEXT '
6443	17275	1605	
6444	17276	3024	
6445	17277	4000	
6446	17300	6011	XXPRINT, 6011/TEXT 'PRINT '
6447	17301	2022	
6448	17302	1116	
6449	17303	2440	
6450	17304	2000	
6451	17305	6012	XXRETURN, 6012/TEXT 'RETURN'
6452	17306	2205	
6453	17307	2425	
6454	17310	2216	
6455	17311	2000	
6456	17312	6013	XXSTOP, 6013/TEXT 'STOP'
6457	17313	2324	

6458	17314	1720	
6459	17315	0020	
6460	17316	6014	XXDIM, 6014/TEXT 'DIM '
6461	17317	2411	
6462	17320	1540	
6463	17321	0000	
6464	17322	6015	XXRSTOR, 6015/TEXT 'RESTORE'
6465	17323	2205	
6466	17324	2324	
6467	17325	1722	
6468	17326	0500	
6469	17327	6016	XXREM, 6016/TEXT 'REM '
6470	17330	2205	
6471	17331	1540	
6472	17332	0002	
6473	17333	6017	XXDEF, 6017/TEXT 'DEF '
6474	17334	2405	
6475	17335	0640	
6476	17336	0000	
6477	17337	6020	XXREAD, 6020/TEXT 'READ '
6478	17340	2205	
6479	17341	0104	
6480	17342	4000	
6481	17343	6021	XXDATA, 6021/TEXT 'DATA '
6482	17344	0401	
6483	17345	2401	
6484	17346	4000	
6485			
6486	17347	6024	XXTTVI, 6024/TEXT 'TTY IN'
6487	17350	2424	
6488	17351	3140	
6489	17352	1116	
6490	17353	0000	
6491	17354	6025	XXTTYO, 6025/TEXT 'TTY OUT'
6492	17355	2424	
6493	17356	3140	
6494	17357	1725	
6495	17362	2400	
6496	17361	6026	XXLPT, 6026/TEXT 'LPT'
6497	17362	1420	
6498	17363	2400	
6499	17364	6027	XXPTP, 6027/TEXT 'PTP'
6500	17365	2224	
6501	17366	2000	
6502	17367	6030	XXPTR, 6030/TEXT 'PTR'
6503	17370	2224	
6504	17371	2200	
6505			
6506	17372	6032	XXRUB, 6032/TEXT 'RUBOUTS'
6507	17373	2225	
6508	17374	0217	
6509	17375	2524	
6510	17376	2300	
6511	17377	6233	XXNRUB, 6033/TEXT 'NO RUBOUTS'
6512	17400	1617	

/6031 HAS BEEN REMOVED,


```

6513 17401 4022
6514 17402 2532
6515 17403 1725
6516 17404 2423
6517 17405 2000
6518 17406 6234 XXCLEAR,6034)TEXT 'CLEAR'
6519 17407 0114
6520 17410 0571
6521 17411 2000
6522 17412 6035 XYDELAY,6035)TEXT 'DELAY'
6523 17413 2423
6524 17414 1471
6525 17415 3124
6526 17416 6035 XXUSE, 6036)TEXT 'USE '
6527 17417 2023
6528 17422 2540
6529 17421 0000
6530 17422 6037 XXPLOT, 6037)TEXT 'PLOT '
6531 17423 2014
6532 17424 1724
6533 17425 4000
6534 17426 6042 XXREAL, 6040)TEXT 'REAL TIME '
6535 17427 2205
6536 17430 0114
6537 17431 4024
6538 17432 1115
6539 17433 0540
6540 17434 2000
6541 17435 6041 XXSETR, 6041)TEXT 'SET RATE '
6542 17436 2325
6543 17437 2440
6544 17440 2201
6545 17441 2405
6546 17442 4000
6547 17443 6042 XXSETC, 6042)TEXT 'SET CLOCK '
6548 17444 2305
6549 17445 2440
6550 17446 0314
6551 17447 1703
6552 17450 1340
6553 17451 0200
6554 17452 6043 XXWAITC,6043)TEXT 'WAITC'
6555 17453 2701
6556 17454 1124
6557 17455 0300
6558 17456 6044 YYWAIT, 6044)TEXT 'WAIT'
6559 17457 2701
6560 17460 1124
6561 17461 0000
6562 17462 6045 XXUCOM, 6045)TEXT 'UCOM '
6563 17463 2503
6564 17464 1715
6565 17465 4000
6566 17466 6046 XXACPT, 6046)TEXT 'ACCEPT'
6567 17467 0123

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6568 17470 0305
6569 17471 2024
6570 17472 0000
6571 17473 6047 XXREJT, 6047)TEXT 'REJECT'
6572 17474 2205
6573 17475 1205
6574 17476 0324
6575 17477 0000
6576
6577
6578 17500 0000 0
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6580
6581 17501 3000 XXTEXT, 3000
6582 17502 6023 XEOF, 6023
6583 17503 4113 XXUNARY, 4113
6584 17504 4014 XXFINI, 4014
6585 17505 6022 XXEXIT, 6022
6586 17506 2000 XCLIT0, 2000)2001)2002)2003
6587 17507 2201
6588 17510 2002
6589 17511 2203
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6591 17512 0000 NOPUNCH
6592 17563 0000 LINBUF, ZBLOCK 51
6593 17643 0000 LBEGIN, ZBLOCK 60
6594 17644 0000 ENDLIN, 0
6595 17704 0000 POLIST, ZBLOCK 40
6596 17705 0000 ENDPOL, 0
6597 17725 0000 FORLIST, ZBLOCK 20
6598 17725 0000 GOLIST, ZBLOCK 30
6599 17755 0000 GSBEND, 0
6600 ENPUNCH
6601
6602 8

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ABODEF 1756	BEGFIX 3762	CBISRT 7547	EXPOK 5265
ABOGET 0706	BIDLE 6713	COLIT 7526	FAD 4002
ABPP 0325	BKWD 2409	CSPLT 7556	FACEXT 1314
AN3 6025	BREAK 6522	COLAST 7512	FADJ 4400
ACCEPT 7473	BSKIP 0732	DECEXP 2043	FATNAX 6273
ACC 0025	BUSY 6737	DECFRA 3126	FATNC 6337
ACN 4417	CARRET 2772	DEFEPR 1526	FATNCW 6342
ACOUNT 0022	CEINX 7065	OLF 1576	FATNCJ 6345
ACS 0024	CCANA 7340	DELAY 7463	FATAC1 6320
AC1 0022	CELECO 2000	DELETE 4501	FATNC2 6327
AC2 0017	COLNP 7445	DELOLY 7142	FATNC3 6312
ACA 0018	CHETW 2216	DEVECH 7175	FATNC4 6315
ACACR 0007	CHETW 2216	NEWTON 7174	FATNC5 6320
ACD1 0025	CLAB 4133	DICO 6751	FATNC6 6323
ACD2 0025	CLBA 4135	DIGIN 3224	FATNC7 6326
ACD3 0027	CLC 7477	DIGIT 1204	FATNC8 6331
ACD 7477	CLCA 4137	DIGLUP 6957	FATNC9 6334
ACU 7477	CLEAR 7432	DILC 6752	FATNSX 6272
ABOCCP 2046	CLEARV 2492	DILE 6256	FATNT 6276
ACCL 4532	CLEN 4134	DILX 6253	FATNTT 6321
ACOUNT 0010	CLKSTS 0703	DILY 6254	FENTLC 6645
ADCY 0012	CLOCKT 2175	DIM 6472	FENTLO 6703
ADDPES 0007	CLOE 6152	DIMFLA 2034	FDIGIT 3360
AOLE 6535	CLRCNT 2342	DINP 7511	FDV 7002
ADLM 6531	CLS 7477	DIFE 6057	FDVI 7400
ADPB 6533	CLSA 6135	DISAUT 2015	FENTER 4435
ADRS 6537	CLSK 6131	DISB 0136	FEXIT 2002
ADSE 6555	CLTEMP 2011	DISD 6052	FEYPC1 6072
ADSK 6534	CLZE 6132	DIVLP 4705	FEYPC2 6075
ADST 6532	CNCLR 0143	DIVXTE 3364	FEYPC3 6102
AGET 0321	CNTLCF 6720	DIY 6055	FEYPC4 6103
ALGNLP 4466	CNTLCR 6672	DLAST 7511	FEYPC5 6106
ALLOC 1451	CNTLO 3133	DOAD 2362	FEYPC6 6111
ALL3 3146	CODELO 0034	DOADLP 0366	FEYPF 6267
ALTMOD 2663	COLUMN 0126	DOITNO 1247	FEYPI 6261
ALI 4654	COMMON 3400	DOTZER 7371	FEYPU 6264
AMATCH 6526	COMPAR 2136	DPFLAG 3365	FINDIT 0557
ANDRM 4430	CONST 1367	DQINTX 3178	FINDLU 0565
APUT 2023	COS 5016	DSCREW 0375	FIX 4704
APUT1 0023	CORT 7326	DVLOOP 5245	FIXEX1 4773
APUT2 0024	CONTFF 7343	EDIT 2405	FIXITU 5220
ARGERR 7363	CONTLP 7331	END 2567	FIXLIN 2113
ARRLOC 0003	CONTO 7340	ENDLIN 7643	FIXLUP 4750
ARI 4402	CONTH 7344	ENDNUM 3331	FIXUP 5146
ATEMP 0323	CRINTX 3076	ENDPOL 7704	FJMP 1002
ATEMP2 0324	CRLF 6531	ECFAD 4526	FJMPI 1402
ATLINE 6951	CRLFPR 3740	EPTR 0256	FJUMP 1130
ATN 6200	CT1 0016	ERROR 4142	FLO 3002
ATNBIG 6265	CT2 0015	EVAL 1204	FLOI 3402
ATNLOW 6222	CT3 0014	EVALGO 1027	FLOGC1 6172
ATNNOT 6237	DVTLOO 5024	EXECUT 2213	FLOGC2 6153
AUTEMP 0063	DATAER 1667	EXIT 2402	FLOGC3 6156
BARROW 2666	DBAD 7513	EXP 6220	FLOGC4 6161
BCDEF 1757	DBAD 7532	EXPGDO 5242	FMP 6000
BCWD5 4502	DBGOT 7420	EXPLON 5764	FMPI 6400

FMTNF 5123	FSINZZ 5710	IDLEAC 6732	JOIGIT 3124
FMT1 5125	FSIN10 5641	IDLECD 6725	JISDIG 3367
FMT2 5125	FSLE 0150	IDLECI 6726	JMATCH 2766
FMT3 5130	FSLT 0110	IDLELK 6731	JPUTCH 0777
FN 5453	FSNE 0040	IDLEPC 6733	JTXIT 3123
FNERR 0352	FSQRY 5427	IF 0375	JUSTO 3150
FNEXIT 1200	FST 2022	IGNORE 2115	JUSTOF 3162
FOR 0413	FSTI 2420	IIXR 7414	JUSTOP 3163
FORCT 0063	FTANT1 5677	IMMED 2454	JUSTI 3145
FOROON 0063	FTANT2 5722	IN 3431	JUST2 3147
FORERR 0501	FUNTAB 1131	INCHAR 7255	KEYND 0231
FORLIM 0721	FUPRC1 5762	INDEX 0127	LBEGIN 7543
FORLIS 7705	FWD 0200	INDEX1 2013	LCF 6662
FORSTE 2724	FXXPFX 6023	INDEX2 0014	LET 0312
FORVAR 0452	GALT 7247	INLCYM 4255	LETOO 2225
FOUND 0575	GOIM2 1564	INLOOP 0572	LETTER 3446
FOURLF 3557	GET 0021	INLUPF 0432	LFXLUP 2333
FPADD 4456	GETADD 1420	INODUN 6710	LHALF 3070
FPADDR 4304	GETARY 7462	INOPPP 6641	LIMIT 0203
FPDIV 4667	GETBLK 1674	INOTTT 6645	LINBUF 7512
FPDIT 4237	GETCH 7201	INPLUP 4034	LINENO 0252
FPFLAG 0156	GETJ 1772	INPPT 4263	LINFIX 2332
FPGOTO 4273	GETLIN 2623	INPUT 4007	LIST 3620
FPJMP 4317	GETLRE 2620	INSERT 2032	LISTAL 3616
FPJUMP 4274	GETOPR 1215	INSRTS 2030	LISTLU 3622
FPLAC 4351	GETVAR 0311	INT 6434	LISTSD 3617
FPLoop 4222	GETWD 0177	INTAC 6734	LIST2 3640
FPML 4530	GLOOP 2711	INTCDF 6770	LIST3 3655
FPNOAD 4270	GBOOTH 0532	INTCIF 6771	LIST4 3661
FPOPER 4325	GOLIST 7725	INTECO 6762	LISTS 3676
FPPOZ 4227	GOSUB 2505	INTEMP 6736	LITRAL 3131
FPSKIP 4314	GOTEMP 0053	INTER 6600	LLJMP 7457
FPSTO 4322	GOTO 0517	INTEXT 6744	LLJMS 7446
FPSUB 4453	GOTOPR 1202	INTL 6735	LLLUU 7142
FPT 4200	GOTSS 1074	INTOU 6765	LLS 6666
FPTEMP 4576	GOTSTE 0634	INWDM 4064	LNEND 3630
FPTR 0257	GOUT 7251	IPNOPE 4024	LOADED 4127
FPZDIV 4736	GPTR 0260	IPDINT 7034	LOCCTR 0345
FRNDX 5424	GRB 7224	ISDEF2 3512	LOCCTH 0671
FRSTNE 2155	GRDELA 7222	ISDIG 6532	LOCMP 1673
FSS 5020	GSENO 7755	ISOIM 1473	LOG 6114
FSSI 5420	GSPTR 2145	ISCT 7407	LOGACE 4165
FSEQ 0050	GSSI 1562	ISIT 4566	LOGFWD 6164
FSGE 0120	GSSI 1563	ISITOF 0550	LOGGW 6167
FSGT 0140	GTHKLP 1710	ISITFU 1110	LOWLOC 2171
FSHIFT 7443	GTEMP 7254	ISITLI 4104	LPTOUT 7163
FSINC1 5713	GWHERE 7272	ISLIT 4133	LSF 6661
FSINC3 5716	HFOUND 7321	ISSOME 1944	LSYLOC 2162
FSINC4 5721	HIGHW 4333	ISUMIN 1013	LUP 3425
FSINCS 5724	HLOOP 2722	ITSDEF 3514	LUPF 2426
FSINCA 5727	HPT 0261	ITSDP 3256	L4LUP 3664
FSINCT 5732	HRCAR 7256	ITSE 3263	MACHIN 2220
FSINM4 5735	HRLP 7322	ITSDP 1220	MAYZER 4612
FSINOK 5657	HSMES 7323	ITSP 3320	MENDLI 0241
FSINZ 5705	IAMES 2156	JBENT 3707	MENDPO 2363

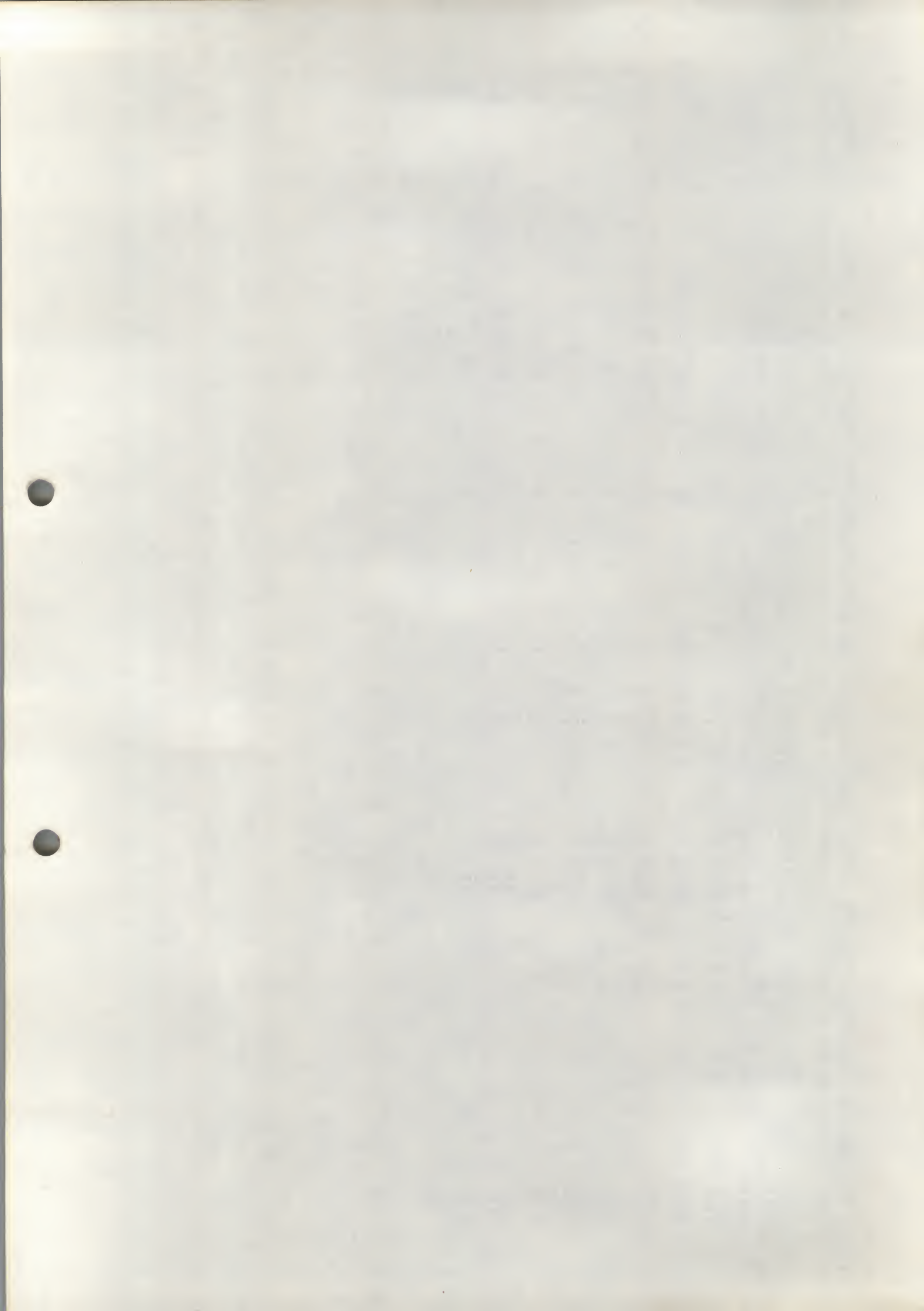
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MEVALG 7431	NULJOB 7415	017 5147	076434 2765
MOOLIS 0720	NULLOP 7430	01742 3375	076428 2763
MOSPEN 0525	NOMBUF 5335	0175 7267	076420 7263
MINUS 1316	OADD 4435	0177 0027	07673 3316
MHESI 0173	OMIGH 1177	01774 3376	077 0270
MLEND 0174	ORLOW 1165	02 0062	077254 6544
MLINBU 2340	OROP 7101	0200 0185	077250 3473
MRSOPE 2736	ORC 5205	020424 3373	07715 2775
MREED 6470	ORMLIM 7115	02062 5346	077254 3100
MREIN 4000	OROR 7113	0212 0010	077258 3371
MREMO 1601	OROUNT 7044	0215 0207	07737 3122
MOVE 2012	ORCV 0132	023 1366	07740 3354
MOVLP 2772	ORLAG 7102	0233 3772	07741 3765
MPY 5301	ORLOW 7115	0240 0051	07743 4743
MPVLP 4552	ORJMP 1276	0253 5150	07745 0162
MTXIT 3071	ORLOP 0046	0255 5151	07746 7244
MULCLR 4571	ORL 2151	02564 5158	07753 3104
MULEXP 3146	ORNOIN 1064	02568 6575	07762 2327
MULATE 3363	ORSS 1076	0260 0011	077634 0774
MUSTBE 4570	ORLYI 3322	027 3373	077635 3101
NDELAY 7420	ORTAG 5452	0305 5152	077644 1274
NEWCHA 2815	OR7736 2326	032 3121	077648 3102
NEWLIN 2610	OROGNE 1203	036 2767	07764C 3374
NEXT 0600	OPE 0230	037378 2773	07764D 6777
NEXTER 0673	OPERAN 0073	03754 1162	07766 5154
NEXTVA 0637	OPNUL 7067	03755 1273	07770 0255
NINTEC 7457	OPPOINT 7065	0377 0071	07771 5155
NOBUMP 4633	OPOTAB 7073	04 0160	07772 5157
NOCCMH 0335	OPRST 7155	040 2770	07773 5346
NOINT 0134	OPS 0026	04001 7525	07774 1566
NONBLN 3110	OPUTC 7041	04014 1163	07775 6776
NONZER 5016	OP1 0023	042 3126	07776 3372
NOPARE 1035	OP2 0722	04220 3105	07777 7114
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NORLFT 6423	OTEMP 1271	05400 5347	PAL1 0150
NORMED 5220	OTHER 3002	06201A 6615	PANORM 0146
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NORUBO 5574	OUTDEL 7146	06202 6775	PARI 0147
NOSS1 1462	OUTDEV 0131	07 0072	PASSCR 0072
NOSS2 1453	OUTD2 0130	070 6774	PASSUM 7440
NOT 3427	OUTIT 7043	0700 1272	PBEGFI 1776
NOTBAD 2127	OUTNUM 5200	07000A 2560	PBIDLE 7161
NOTBIG 4620	CV 0012	07000B 3474	PBOMB 0367
NOTCR 3023	O1000 3550	07000C 7456	PBUSY 7157
NOTFRS 2061	O11 0504	07077 1275	PCCUNT 0744
NOTHER 0435	O110 2361	07520 5153	PCHKFI 0163
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NOTNOW 2020	O122 2771	07570 6456	PCOWT 0141
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NOTX10 5236	O14 2360	07601 7260	PEDIT 0120
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NSYMTA 0006	O140B 2772	07610 5345	PERROR 0077

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PGETLI 0124	PPUTCH 0033	QBIDLE 7257	SSONE 0344
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PIGNOR 0471	PRINGU 2225	READY 6525	SUBRA 2161
PINCHA 6741	PRINRE 2242	REALTI 7473	SXERR 6441
PINT 5676	PRINSE 2312	REJECT 7473	TAB 5547
PISITL 0175	PRINT 2173	RELATE 1342	TAB00S 6367
PJSET 2461	PRINTC 2207	REMPAC 3043	TAB00 6350
PLBEG1 0172	PRINTG 2206	RESET1 7116	TABFLG 2345
PLET00 0024	PRINTH 2222	RESET2 7141	TABOK 6360
PLETTE 3103	PRINTY 3722	RESTOR 3773	TABTHR 2362
PLIMIT 2561	PRINUM 3747	RETNER 0713	TAN 5600
PLINBU 0037	PRINVA 3653	RETURN 0677	TBEGFI 5572
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PLOG 5775	PRTXRE 3722	RNOJMP 5350	TIM 7477
PLOT 7400	PSGN 5675	RTERR 7373	TIM1 0004
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PLUS 1312	PSLOOP 0116	RUN 2452	TMP 0031
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POADO 0157	PTABLE 2777	SCRATC 2440	TSTFX 7417
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POR 3551	PTXT 0276	SETCLO 7473	TTYIN 7173
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POTHER 2776	PTURIG 3021	SETUP 7400	TWOTH 2357
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POUTNU 0117	PUSH 2344	SIMPLV 3466	TXTPAK 3046
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UGLC 0345	UWAIT 0437	XXFN 7127	XXTIME 7204
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UGLS 0340	UIF 7503	XXGE 7040	XXTTY 7201
UGEVCO 0236	UI0 0236	XXGET 7173	XXTTYI 7347
UGDQ 0051	UI30 0013	XXGOSU 7241	XXTYO 7354
UGDPER 1263	UI7 0047	XXGOTO 7246	XXUCOM 7462
UGFUD 0756	UI77 0217	XXGT 7060	XXUNAR 7503
UGFUD 0757	UPP 7504	XXIF 7260	XXUPAR 7013
UGFUD 0257	UI707 0004	XXINPU 7263	XXUSE 7416
UGM1 3562	US210 0034	XXINT 7142	XXUUF 7212
UGEXT 0234	U7 0033	XXLERA 7105	XXWAIT 7452
UGEXT2 0243	U7762 0052	XXLE 7015	YYWAIT 7456
UGEXT3 0245	U7767 0035	XXLET 7270	ZERCON 5144
UGEXT4 0240	U7775 0021	XXLIS 7162	ZERO 0152
UGNAC 0631	U7777 0250	XXLIST 7156	ZFIXEX 4767
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UJMS 0055	VARYEM 0553	XXLOG 7123	ZZADC 0770
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UJOPER 1321	VSCHLU 3475	XXLT 7056	
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UPAGET 0653	WAIT 7473	XXNE 7043	
UPARRO 6457	WAITC 7473	XXNEXT 7274	
UPARRX 5740	WOTEMP 1075	XXNRUB 7377	
UPARR2 4365	WOPD 0350	XXOPEN 7103	
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UPFUN 0747	XXMUST 7345	XXPRIN 7300	
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UREJT 0456	XXRESTA 1003	XXPUT 7153	
USE 7446	XXABS 7134	XXRBR 7070	
USERFN 1620	XXACPT 7466	XXREAD 7337	
USETC 0411	XXADB 7223	XXREAL 7426	
USETF 0550	XXADC 7176	XXREJT 7473	
USETM 0416	XXATN 7120	XXREM 7327	
USETR 0400	XXBSLS 7250	XXRETR 7305	
USKIP1 7461	XXCLC 7220	XXRND 7145	
UTEMP 0053	XXCLEA 7406	XXRSTO 7322	
UTIM 0541	XXCLOS 7066	XXRUB 7372	
UUAC1 0654	XXCLS 7215	XXRUN 7165	
UUAC2 0661	XXCOMM 7062	XXSCR 7170	
UUAC3 0665	XXCOS 7112	XXSEMI 7064	
UUDATA 7567	XXCRLF 7226	XXSETC 7443	
UUEVC 0725	XXDATA 7343	XXSETR 7435	
UUFUDG 0735	XXDEF 7333	XXSGN 7137	
UUJMP 0722	XXDELA 7412	XXSIN 7150	
UUJMS 0747	XXDIM 7316	XXSLAS 7031	
UUMEVA 0673	XXEG 7046	XXSOR 7131	
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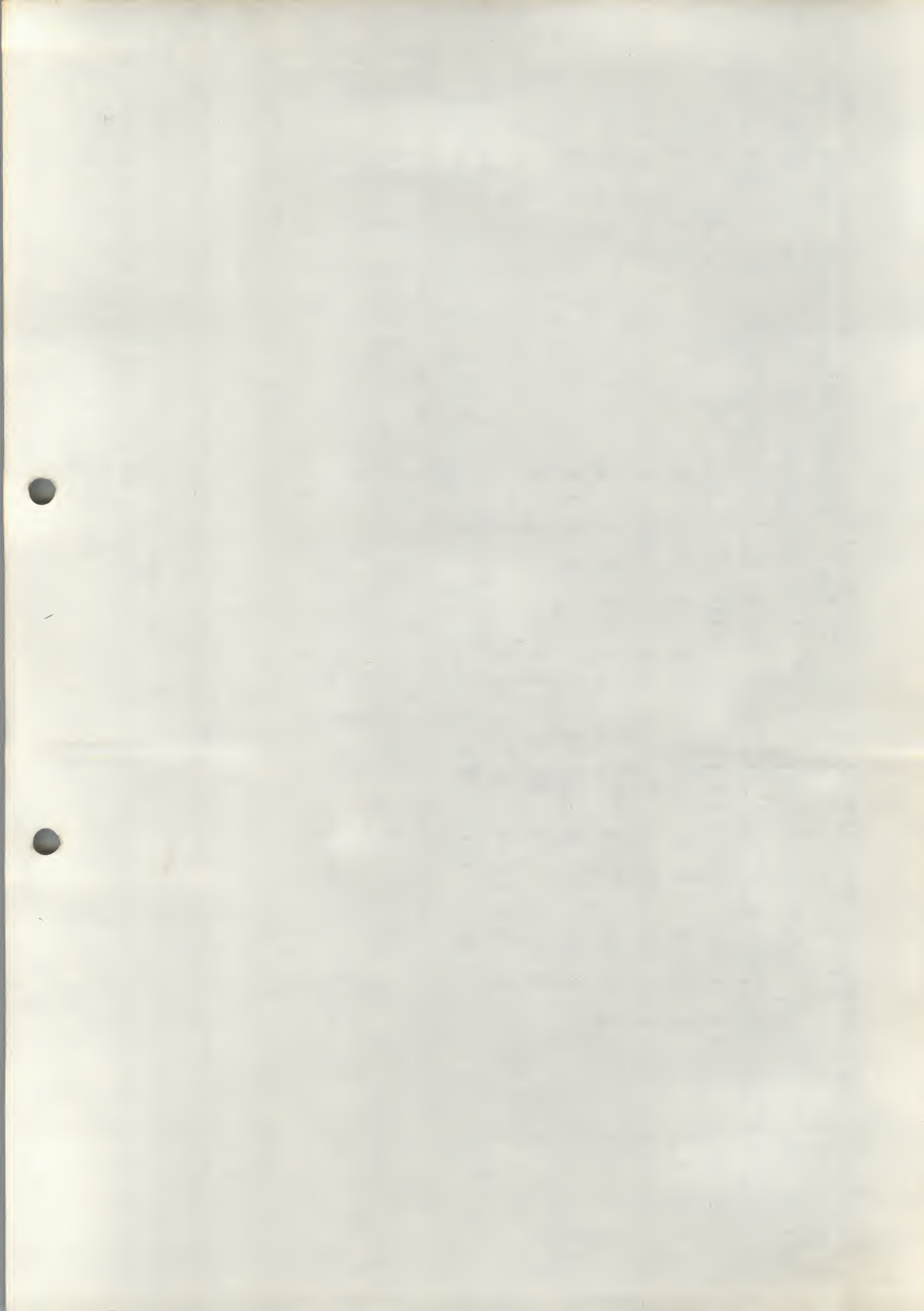
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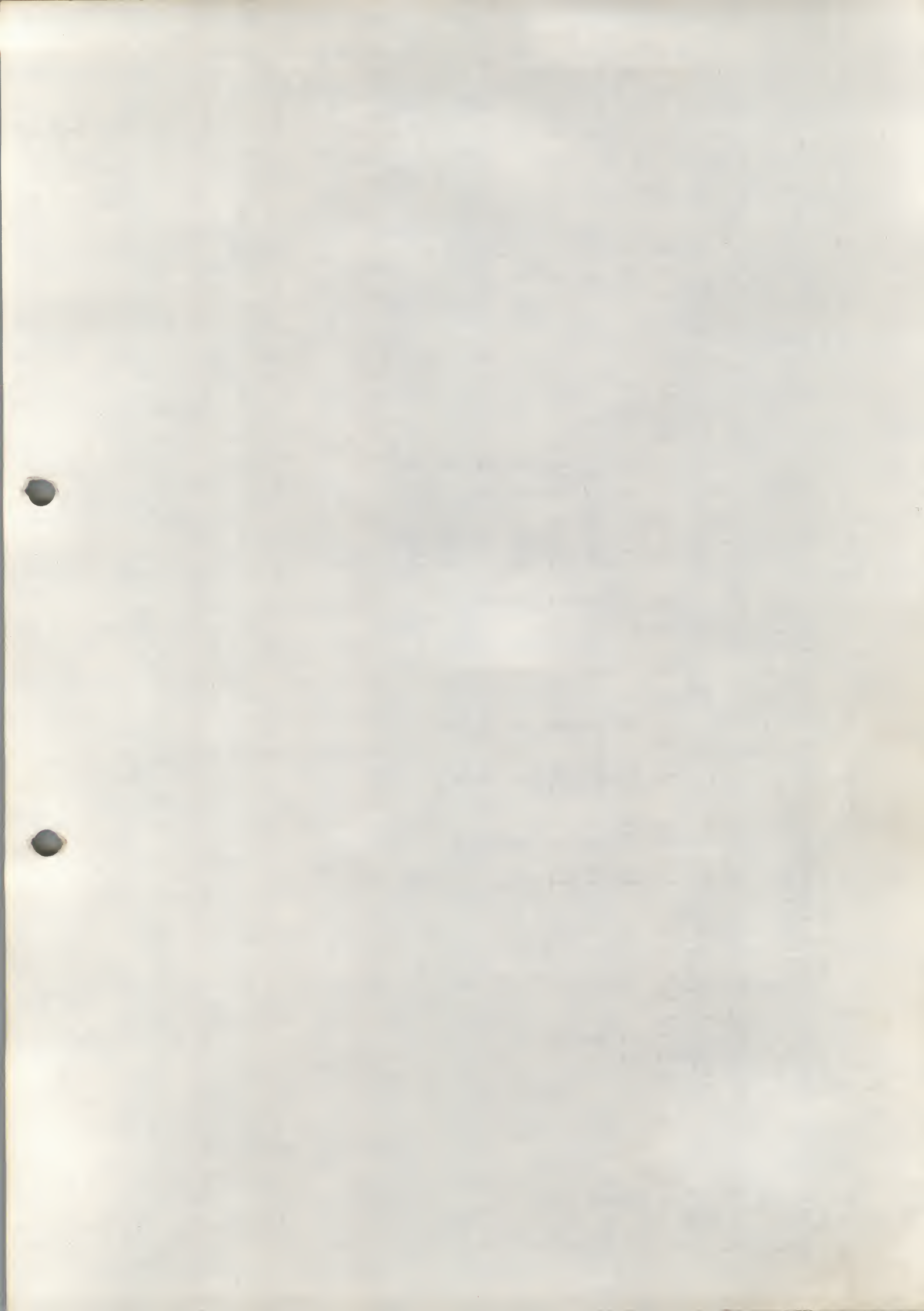
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LLS	4353#	4623								
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LOGFWD	3917	3932#								
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MGOLIS	814	828#								
MGSBEN	690	703#								
MINUS	1151	1165#								
MLBEGI	405#	2019								
MLEND	406#	2000								
MLINBU	311#	1529								
MNSONE	837	842#								
MOREOI	4211#	4218								
MOREIN	2674#	2718								
MORERO	1373#	1401								
MOVE	1512#	1525								
MOVLU	1562#	1568								
MPY	3351	3397	3408	3419	3454#	3465				
MPYLUP	3065#	3078								

[illegible]



0256A	3289	3349#							
0256B	4307	4318#							
0260	287#	3244	3268	3317	3320				
027	2264	2359#							
0305	3296	3345#							
032	2132	2187#							
036	1940	2203#							
03737B	2025	2267#							
03754	962	1034#							
03755	1098	1146#							
0377	336#	2871	2928	3194	3422	3636			
04	391#	1327	2748	3399	4113				
042	1974	2070	2084#						
04201	5112	5112#							
0421#	897	1202#							
042	2178#	2255#							
04270	2178#	2232							
04213	532	1261#							
05422	3411	3432	3444	3476#					
06221A	4375	4377#	4462						
06221B	4556	4558#							
06222	4369	4521#							
07	337#	2834	2874	3507	4372				
070	4368	4522#							
0723	1893	1124	1127	1145#					
07200A	1872	1893	1928#						
07200B	2437#	2439							
07200C	5363	5371	5384#						
07077	1097	1148#							
07520	3332	3346#							
07545	3205	3227#							
07570	4196#	4199							
07577	3054	3066#							
07577B	5136	5152#							
07620	2899	2923	2927#						
07601	4785	4825#							
07603	1987	2088#							
07610	3375	3474#							
07612	4795	4827#							
07642A	864	865#							
07642B	2001	2079#							
07642C	4822	4828#							
07673	2261	2317#							
077	335#	1127	1135	1589	1728	1715	2063	2069	2277
	2573	2620	2626	2627	2690				2150
07706A	4278	4286#							
07706C	2422	2435#							
07715	1996	2089#							
07725A	2132	2160#							
07725B	2296	2360#							
07737	2122	2188#							
07740	323#	2047	2066	2180	3407	3498			
07741	2603	2616#							
07743	3167	3199#							
07745	393#	3063							
07746	4825	4829#	4844						
07753	2146	2174#							
07762	1730	1748#							
07763A	849	874#							
07763B	2104	2143	2169#						
07764A	1128	1147#							
07764B	2125	2170#							
07764C	2267	2363#							
07764D	4420	4523#							
07766	3329	3347#							
07772	324#	3182	3279	3541	4792				
07771	3254	3327	3348#						
07772	3285	3350#							
07773	3403	3475#							
07774	1318	1341#							
07775	4417	4522#							
07776	2299	2361#							
07777	4620	4645#							
PACN	3173	3198#							
PAL1	383#	3184	3384	3416	3455	3462	3463		
PANORM	381#	1476	1484	2626	2828	3484	3643	4166	5483
PARGER	318#	3532	3895	4202					
PAR1	382#	3105	3208	3393	3394	3395	3396	3428	
PASSCR	351	666#	672						
PASSUM	5026	5013	5037#						
PREGFI	1481	1487#							
PBIDLE	4560	4704#							
PBOMB	560	564#							
PBUSY	4663	4702#							
PCCUNT	848#	852							
PCHKFI	394#	1417	1537	2474					
PCOMMO	2349	2350#							
PCOWT	376#	1816	1937	2521	2535	2689			
PDEVCO	5035	5039#	5058						
PDL	309#	1790	1791	1792	1920	2484	2485	2486	2792
	5447								4437
POLIST	364	6594#							
PEDIT	359#	1578	1940	2538	2793	4438			
PERMSY	1933	6272#							
PERROR	342#	550	570	683	704	717	807	823	1343
	1796	4177	4947	4962	5167	5401			1411
PEVAL	344#	428	528	534	591	634	760	772	1392
	3595	4215							2709
PEVALG	1690	1691#							
PEXECU	346#	655	702	798	804	822	1402	1670	1738
	1862	2649	2724	4219	4742				1857
PEXP	3800	3804#							
PFINDI	750	806#							
PFIX	349#	529	535	934	937	942	1472	2347	3629
	4164	4223	5142						3834
PFNEPR	3569	3575	3614#						
PFPLCO	3246	3279	3283	3284#					
PGETAO	145#	542	635	778	949	5877			
PGETBL	356#	2424	2463						
PGETCH	324#	1442	1977						
PGETLI	163#	1825	2697						
PGETLR	2116	2121#							
PGETOP	352#	1125							
PGETVA	354#	1375	2702						
PGOLIS	395#	1444	1446	1925					
PGOTOP	350#	917	962						
PHRCHA	4403	4482#							
PIGNOR	654	659#	867						
PINCHA	4425	4483#							
PINT	3724	3748#	3779						

[illegible]



RESET1	374	46518	4657
RESEY2	4688#	4688	5247
RECTOR	467	26459	
RETNER	816	873#	
RETURN	440	811#	
RHALL	2138	2143#	
RHLERT	374	4129#	8137 4138
RHO	968	3485	3487#
RNOIMP	3483#	3511	
RTERR	4642#	4654	
RUBO	420	3484	
RUN	1838	1838#	
RUNIN	1888	1888#	
RUNLOP	1888#	1884	
RUNNOT	1872	1839#	
RUNOTA	1891	1817#	
RUNZLU	1852#	1815	
RUNDND	1895	1811#	
SCHOR	1434#	1810	
SCHATC	892	1888#	
SEARCH	1384	1356	1824#
SETALO	492	5421#	
SETBAY	489	5404#	
SETSON	3024	3033#	
SETUP	1864	5229#	5215
SGN	834#	841	846 847 861 867 986 3739
SHPLV	2426	2431#	
SH	999	3647	3696 3698# 3738
SINCHA	4662	4705#	
SJUMP	450	453#	
SKIPIY	468	471	599 654# 1371 5059 5912
SLASH	1153	1177#	
SLOOP	357	2835#	
SLSMTH	1178	1180	1182#
SNUMFL	331#	1968	2244 2252 2291 2345 2405 2426 2487 2494
	2445	2452	2453 2464 2466 4120 2405 2426 4237
SPACER	378#	1340	5153
SPECIN	379#	4384	
SPLEIT	379#	1303	4114 5027
SSEXIT	3528	3594#	
SOLOOP	3543#	3553	
SQR	984	3524#	3555
SBERR	1247	1256	1343#
SSFIX	3225#		
SSONE	523	530	544#
SSWNO	524	536	545#
STAR	1152	1174#	
START	57	608#	
STICKI	368	4154#	4157
STOP	465	473	1936#
STOVAR	353	431	541# 549
SUBRA	1549	1556	1627# 1634
SXERR	343	479	493 501 502 503 504 505 506 507
	508	509	510 511 512 991 992 993 1008 1010
	1014	1030	1031 1032 4174# 4176
TAB	1012	3624#	3644
TABDES	3647	4071	4079 4286#
TABDO	1782	4064#	
TABFLG	1663	1693	1764# 360A

[illegible]

XXPTD	6499#
XXPTR	6502#
XXPUT	6341#
XXPRA	6312#
XXREAD	6477#
XXREAL	6534#
XXRELT	6571#
XXRER	6444#
XXRETR	6451#
XXRNO	6350#
XXRSTO	6444#
XXRUB	6506#
XXRUN	6371#
XXRER	6374#
XXRPMI	6300#
XXRFTC	6447#
XXRSTR	6541#
XXSGN	6549#
XXSIN	6358#
XXSLAS	6279#
XXSGR	6363#
XXSYJR	6277#
XXSTEP	6316#
XXSTOP	6498#
XXT48	6384#
XXTAN	6331#
XXTEXT	341 6581#
XXTHEN	1930 6425#
XXTIME	6386#
XXTO	6312#
XXTTY	6383#
XXTTYI	6486#
XXTTYO	6491#
XXUCCH	6562#
XXUNAR	6563#
XXUPAR	6281#
XXUSE	6526#
XXUUF	6392#
XXWAIT	6554#
YYWAIT	6558#
ZERDON	3334 3339#
ZERO	385# 1149 2254 3970
ZFIXEX	3203 3219#
ZZADS	6187 6196# 6197 6198
ZZADC	6160 6190# 6193

